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THE HEALTH MAGAZINE

HYGEIA

THE SWING-AGE YOUTH

See page 206

MARCH
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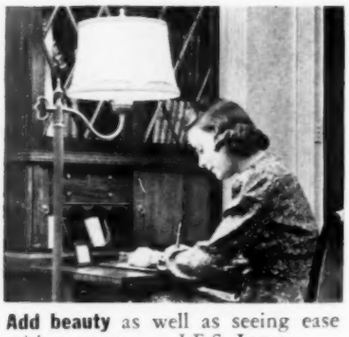

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FORECAST FOR APRIL

"Cancer is far more securely rooted in the very nature of man than is any germ-borne ailment," C. C. Little, M.D., declares in the opening paragraph of his article on "Deadly Disease Number 3: Cancer," which will appear in the April issue. Few people understand the fundamental nature of cancer, so this article is being published to introduce and thoroughly acquaint laymen with what is definitely known about it. Cancer ranks third among the most frequent causes of death. The article reviews the steps in man's progress in the fight against this disease and explains what is being done now in research and education. "Cancer can only be controlled when the public has the basic knowledge concerning it," says Dr. Little. So don't miss this article!

Each year in the United States alone the number of persons who wilfully kill themselves is sufficient to populate—or depopulate—a fairly large town—almost 20,000 persons, according to Douglas E. Lawson, who writes "Why Man Commits Suicide." What psychologic trends of thought are behind these persons' actions? Some of them are victims of a form of insanity; some are just lonely; others are in great physical pain. All of them need help. Read this unusual article, for perhaps some day you will need to know what to do.

Among the other articles in the April issue are "Diet in Heart Disease" by Louis Faugeres Bishop Jr., M.D., and Ruth Bennett; "Hospital with a Soul" by Grace Igo Hall; "Does Your Child Worry?" by Rose Zeligs, and "When Is the Time to Straighten Teeth?" by Don Chalmers Lyons, D.D.S., Ph.D.

HYGEIA

THE HEALTH MAGAZINE

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Who's Who IN HYGEIA

W. E. AUGHINBAUGH, M.D., LL.M.—a physician and an attorney—is a member of the Bar of the U. S. Supreme Court and several state supreme courts. He is the author of eleven books, the last one "I Swear by Apollo" finding its way to the list of best-sellers. Dr. Aughinbaugh has been a member of the faculties of both Columbia University and New York University and writes a syndicated medical column. He has served on medical commissions in Europe, Asia, Africa, Latin America, the East and the West Indies.

JESSE G. M. BULLOWA, M.D., author of "Influenza and Pneumonia: Deadly Disease No. 2," has been engaged in research on respiratory infections and their treatment for the past fifteen years. He is Visiting Physician at Harlem Hospital, New York City, where he has been in charge of pneumonia service since 1926. Dr. Bullowa is Clinical Professor of Medicine at New York University College of Medicine and also Visiting Physician at the Willard Parker Hospital.

C. W. WYCKOFF, M.D., gave "The Swing-Age Youth" (page 206) as one of the Free Public Health Lectures sponsored by three outstanding Cleveland organizations. He is consultant to the Cleveland Retarded Child Association and has served as Chief of the Bureau of Child Hygiene in Cleveland. He is a past chairman of the section on pediatrics of the Cleveland Academy of Medicine and is a trustee of the Cleveland Medical Library Association.

PAUL A. WHITE, M.D., was an athletic coach for nine years before he took up medicine for his profession. Subsequently, he held a surgical fellowship in the Mayo Foundation and received his master's degree in surgery from the Mayo Foundation in affiliation with the University of Minnesota Post Graduate Medical School. He became a member of the American College of Surgeons five years later and now resides in Davenport, Iowa.

REGINA J. WOODY, who writes in this issue for housewives hospital-bound (page 230) has been with us before. She says, "As a doctor's wife, I have had to learn not to talk about medicine, so I suppose it naturally came out in writing. . . . Then, too, writing keeps me out of my children's hair, keeps me from taking them too seriously and becoming a nervous wreck because they hold their forks incorrectly or answer back when we have guests. All three are utterly delightful children."

MAURICE J. COSTELLO, M.D., has contributed many articles to the professional periodicals, but "Cancer of the Skin" (page 218) is the first ever published in HYGEIA. Dr. Costello holds a staff appointment at Bellevue Hospital, New York City, and is an instructor in Dermatology and Syphilology at New York University College of Medicine.

LETTERS FROM *Readers*

Appreciation

To the Editor:

May I take this opportunity of expressing my appreciation of your health magazine HYGEIA. Also your splendid answer to the query on the function of the vagus nerve and the result of severing it, which appeared not long ago.

I am a victim of the operation for cutting the left vagus nerve, unfortunately, in 1925. It was done to relieve a basal abscess due to the tubercle bacilli.

For the welfare of many people throughout this world may this procedure in surgery become obsolete.

MRS. M. V. LOGAN, R.N.
Nelson, B. C., Canada

▲

Grateful Teacher

To the Editor:

We do appreciate the copy of HYGEIA which is coming here to Smouse School. We are using this copy as a loan copy for the teachers, and I find our lunch room director as well as the other teachers borrow it to take home overnight.

This plan leaves my own copy in much better condition, and I am having them bound for the school on a WPA Binding Project, with six copies in one binding. They have done an excellent job on them, and we are very proud of our new reference material on health.

We are also grateful for the booklet on "Health Teaching Ideas" which arrived this week. It has some valuable material in an easy-to-take form. They tried to tell me in California last summer that they had HYGEIA beat in health teaching material in a magazine, but I am very hard to convince. A year ago last summer I taught a couple of courses in a state teachers college concerned with exceptional children and mental hygiene, and I found HYGEIA my most helpful source of reference material. Many of us are grateful even when the days are too crowded to take time to sit down to tell you.

BESS R. JOHNSON, Principal,
Des Moines Public Schools
Des Moines, Ia.

▲

For a Minister's Gift

To the Editor:

May I compliment you on your splendid article "Adjustments In Marriage" by Dr. Neil T. McDermott in your November magazine. It is one of the finest articles on the subject I have read. I think this would make an excellent gift to the couples a minister marries.

JAS. L. VAN LEAR, Minister,
First Christian Church
Bolivar, Mo.

When the novelty wears off a baby...

SOMEWHERE ALONG THE LINE a baby stops being a miracle and becomes a person.

The months have made him into a pretty dependable member of the family—no longer a bundle of worry marked "fragile".

Yet often the fact that a baby outgrows infanthood, with its constant and complex threats, makes the pre-school years a neglected interval. It is easy to think that he no longer needs the help of the doctor except in cases of emergency.

That is a serious mistake—for many dangers lurk in these "in-between" years. Your child's heart . . . lungs . . . eyes should be watched. Tonsils and adenoids may cause difficulties.

These, and other problems of bodily growth, make it vitally important that the doctor see the child at regular intervals. These examinations give your doctor a chance to discover trouble before it becomes deep-rooted. They are an important check on a child's diet, habits and condition. And they also let the physician carry out a program of immunization against communicable diseases your child will encounter when he starts school.

Seeing the doctor regularly during these pre-school years is the soundest possible way of making certain that your child will enter the "larger world" with a head start instead of a handicap.

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See your doctor

Hedricle-Blessing

A cheer for the snow—the drifting snow;
Smoother and purer than Beauty's brow;
The creature of thought scarce likes to tread
On the delicate carpet so richly spread.

With feathery wreaths the forest is bound,
And the hills are with glittering diadems crown'd:
'Tis the fairest scene we can have below,
Sing, welcome, then, to the drifting snow!

—*Eliza Cook*

—*From Douglas' Forty Thousand Quotations.*

The New Wagner Hospital Bill

ON THE President's birthday, January 30, he sent to the Congress of the United States a message regarding a new plan for aiding persons requiring medical care in areas in which suitable hospital service may not be available. The President characterized this as "a program for the construction of small hospitals in needy areas of the country, especially in rural areas, not now provided with them." The provision of such hospitals, the President said, would greatly improve existing health services, attract competent doctors and raise the standards of medical care. It was also suggested that the new hospitals would serve the additional purpose of providing laboratory and other diagnostic facilities for the use of local physicians, as well as accommodations for local health departments.

In defining the manner in which such hospitals would be allotted, the President said that they should be built only where they are most needed; that they should not be constructed in communities where public or private institutions are already available to the people in need of service. In order to insure proper location and good standards of operation, he suggested that the approval of projects for the construction of such hospitals should be given by the Surgeon-General of the U. S. Public Health Service with the advice of an advisory council consisting of outstanding medical and scientific authorities who are expert in matters relating to hospital and other public health services. In considering the matter further, the President also suggested that the approval of such projects should be preceded in each instance by a careful survey of the local hospital facilities and needs. The standards for the hospitals are to be established by the Surgeon-General with the advice of his advisory council. When indicated, special provisions are to be made for the care of the tuberculous, and in certain areas of the South the present acute needs for the care of Negro patients are also to be met.

Significant also in the President's message was his suggestion that the method of grants-in-aid should not apply since the areas which he had in mind are so poor that they cannot raise their share of the cost of building and equipping a hospital. He felt, nevertheless, that in such areas public-spirited citizens with means and enough citizens able to pay something for hospital treatment could be found to care for the operating costs.

On February 1, Senator Wagner introduced in the Senate of the United States a new bill, No. S. 3230, to make effective the President's suggestions. On the previous day, the bill was introduced in the Congress by Mr. Lea. A careful reading of the bill indicates that the President, and others concerned with the introduction of this legislation, seem to have been guided to some extent by the platform of the American Medical Association. Thus it is now proposed that funds shall be allotted on evidence of actual need. The principle of local responsibility and local control are also recognized. The hospitals are to be leased to the communities in which they are established, the only consideration for the lease being the maintenance and operation of the hospital in accordance with the provisions of the law. Unfortunately, the bill is not quite clear at this point since it states that the Surgeon-General may terminate a lease on six months' notice, if the hospital fails to comply with the provisions of the act, but says nothing as to what might be done with the hospital in case the lease is terminated.

Criticism has also been made of the proposal that health agencies be placed within the structure of the hospital. There is much difference of opinion as to the desirability of putting the offices of health agencies in hospital buildings and of integrating such health agencies with hospitals.

The Wagner-Lea Bill, if enacted, will place a tremendous responsibility on the Surgeon-General of the U. S. Public Health Service and on the Federal Security Administrator.

The language of the act in many places is somewhat confusing. No doubt in hearings, which may be held before the committee to which this bill has been referred, opportunity will be given to clear up these confusions. It is particularly important to define the authority of federal agencies in relationship to the building of hospitals, inspection, training of personnel and their control. At present, the language of the act seems vague and does not state specifically that it applies just to the hospitals built under the act and not to hospitals in general.

In the platform of the American Medical Association emphasis is placed on the continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability. The platform also recommends the utmost utilization of qualified medical and hospital facilities already established in extending medical services to all the people. Here, again, the proposed legislation would seem to recognize the sound character of these principles. With proper safeguarding of the language of the proposed legislation, it would seem to be in accord with sound practice. Such proposals represent a gradual evolution of medical services and an expansion which is consistent with the initiative and local responsibility which are fundamental in the American democratic system of government.

THAT THYROID

The function of the secretion of the thyroid gland is one of the most spectacular and dramatic of any of the activities going on in the body. If it secretes too much it makes the person extremely nervous and excitable.

THE thyroid gland is one of the most interesting organs in the body not only to the medical profession but to the general public as well. This interest and some knowledge of diseases of the thyroid extend far into antiquity. Ancient Hindu writings back to 2000 B. C. prescribe forms of treatment for goiter. Celcus, Pliny the elder and others described enlargements of goiter in the first century of our Christian era, and Paracelsus in the sixteenth century recognized goiter and its relation to cretinism [early arrested growth].

Much mystery, mysticism and misunderstanding have prevailed throughout the years with respect to the thyroid gland. During the past half century, through general scientific advancement, much of this confusion has been dissipated in medical minds and the problem clarified in the public consciousness.

The thyroid lies in the front of the neck and consists of two lobes or bodies which rest on each side of the trachea or windpipe. These are connected by a band of thyroid tissue across the front of the trachea in the manner of saddlebags. The thyroid, unlike the salivary or other secreting glands, has no ducts carrying its secretion to the surface or to internal locations in the body; instead, it pours its products directly into the blood stream. The function of this secretion is one of the most spectacular and dramatic of any of the activities going on in the body. It acts like the draft on a furnace, the spark in the cylinder of a car or the governor on an engine. This secretion plays an important role in the production of heat and energy; it is the intermediary between the oxygen we breathe and

GLAND

By PAUL A. WHITE

Or if the thyroid gland fails to secrete enough, the person adds weight, often becomes mentally dull, and the heart is slowed down. His appetite is reduced, for the lessened activity requires less fuel for energy.

the food substances we absorb in the tissues at the time of their combustion. The rate of combustion is therefore dependent on the amount and quality of this secretion. It is thus easy to see that if this product from the thyroid is increased, combustion is more rapid. Hence, a person affected in this way is hot, flushed, excitable and nervous. He perspires easily and copiously. The heart beats rapidly, and weight is lost, in spite of an increased appetite which is stimulated to add fuel to those devouring flames. If this thyroid output falls below normal, an exactly opposite set of events occurs. Combustion is slowed down, and body tissues are cooler. The individual is phlegmatic, often mentally dull; the skin is pale, dry and thickened, excreting little perspiration. The heart is slow, and weight is increased. The appetite is reduced, because such slow burning requires little fuel.

This is the elementary picture that every individual should carry in his mind in consideration of the thyroid gland and its diseases. Too much secretion induces a dynamic state of excitation and overwork, with consequent exhaustion in the body's tissues and vital organs. Too little secretion produces an opposite state of lethargy, reduced activity and stagnation in the body's important processes.

One should note, however, that many degrees and gradations may occur in these manifestations of the effects of the thyroid output on the process of combustion. This is the reason that a high degree of medical skill in diagnosis, the greatest precision in laboratory and technical investigation and the most extensive clinical experience is often required in dealing with diseases of the thyroid gland.

The onset and development of either of these phases of disarrangement may be so slow and insidious, or so masked by confusing symptoms from specific organs or nervous, mental and emotional states that for a long time the real condition may be entirely misinterpreted.

If a child is born with very little or no thyroid tissue, it will be dull, listless, dwarfed and exhibit all the signs just given for slow bodily combustion. These children are called cretins and, of course, should be fed thyroid substance under a physician's expert guidance at the earliest possible moment. The outlook for their treatment is not as good, however, as it is for children born with a good thyroid gland which may be damaged or lost by disease early in life. These babies or children respond in a spectacular manner when thyroid is given and may attain and maintain a normal mental and physical state.

In adolescent or adult life, also, the thyroid may be destroyed by inflammation or entirely removed by necessary operation, as in cancer, and necessitate the ingestion of thyroid substance to maintain a normal bodily condition.

Often during adolescence the stress of rapid development and lack of sufficient iodine in food and drink, which is an important element in the thyroid secretion, may induce enlargement of the thyroid gland. This enlargement is due to the deposit of a jelly-like substance called colloid in the cells of the thyroid. This type of enlargement does no harm physically and usually disappears by 25 years of age. It should not be operated on except for the matter of removing a disfigurement. Iodine medication early in life usually prevents the development of this kind of thyroid growth.

We see nodular enlargements of the thyroid gland frequently. They may exist for years without seeming to make any trouble, except for their appearance. These are rounded masses embedded in tiny capsules in the thyroid tissue. Two things may happen to these masses in the course of time. They may begin putting out an excess of thyroid secretion. This usually happens in the fourth or fifth decade of life or later and then produces signs of too much combustion in the body. However, here the development of these signs may be gradual and unnoticed and the real trouble obscured by many things in the life and habits of the individual, so that the condition is completely overlooked until the heart, liver, kidneys and other organs are damaged beyond repair. Further, these masses may develop cancer. Nearly all the cancers of the thyroid gland develop in these lumps. With these things in mind, it is easy to conclude that lumpy nodular thyroids had better be removed by surgery before they give trouble and certainly on the slightest show of causing too much combustion in the body.

Finally, the most spectacular, dramatic and also most dreaded condition affecting the thyroid gland occurs when its individual cells increase in size and number and secrete too much. The onset in these instances may occur at any age but usually manifests itself in the third and fourth decades of life. It may develop rapidly with the signs of too much combustion that are quickly and openly evident. Nervousness, tremor, sweating, pounding heart and ravenous appetite are all present; but loss of weight and prominent eyes will signal to even the least medically minded relatives, friends and neighbors that something is radically wrong.

It is with respect to these manifestations that superstition, ignorance and confusion of opinion run most rampant. Also it is here that the most damage may be done to vital organs in the shortest time by delay, indecision and a wrong diagnosis. The recent discovery that iodine medication will markedly alleviate these symptoms has brought a great boon to these sufferers. But iodine, while easing the stress of this bodily conflagration, will not eliminate the disease entirely. Iodine has the inestimable value of making enough improvement in the patient that operation is safe; no longer is there any fear of the explosive crisis that sometimes occurred before the effect of iodine was known. Many varied and even weird ideas and procedures have been invoked in the treatment of this type of thyroid disease; but surgery, when it may properly be applied, should always be considered.

The thyroid is a wonderfully important organ. Its derangements make marked changes in body function. There is great satisfaction in dealing with these derangements, however, because the thyroid is easily accessible for surgical removal, and the response of the body to thyroid medication is usually prompt when thyroid secretion is low in amount or lacking entirely.

The highest degree of medical training, experience, skill and stamina is often required in carrying out proper diagnostic and therapeutic procedures in thyroid diseases. When the remarkable advances in knowledge concerning the thyroid gland and its diseases are fully utilized through modern medical facilities, the results are often most gratifying.

A photograph of part of the interior of a stomach. The dark area is the pyloric valve, or outlet to the intestine.

The Doctor Looks into Your STOMACH

Man has looked far and wide. He has peered at the infinity of space and the scenes around a corner. But now his curiosity has literally turned his stomach inside out—he looks at it now with the gastroscope.

By JOHN KOBLER

MAN'S tireless curiosity has enabled him to take pictures through fog, to descry distant stars and minute bacteria. But few of his successful attempts to see around corners or through walls are as fascinating or ingenious as the device with which he can look at the scenery inside his own stomach. This remarkable medical instrument, called the gastroscope, can lead to diagnoses and therefore lead to cures impossible by any other method.

Here is a woman, complaining of severe abdominal pains. Routine methods of examination, including even the keen detective work of the x-ray, yield no explanation of her illness. A few years ago, the only course remaining for her physicians would have been to open her abdominal cavity and explore it, an operation always fraught with peril and therefore to be avoided whenever possible. But now the

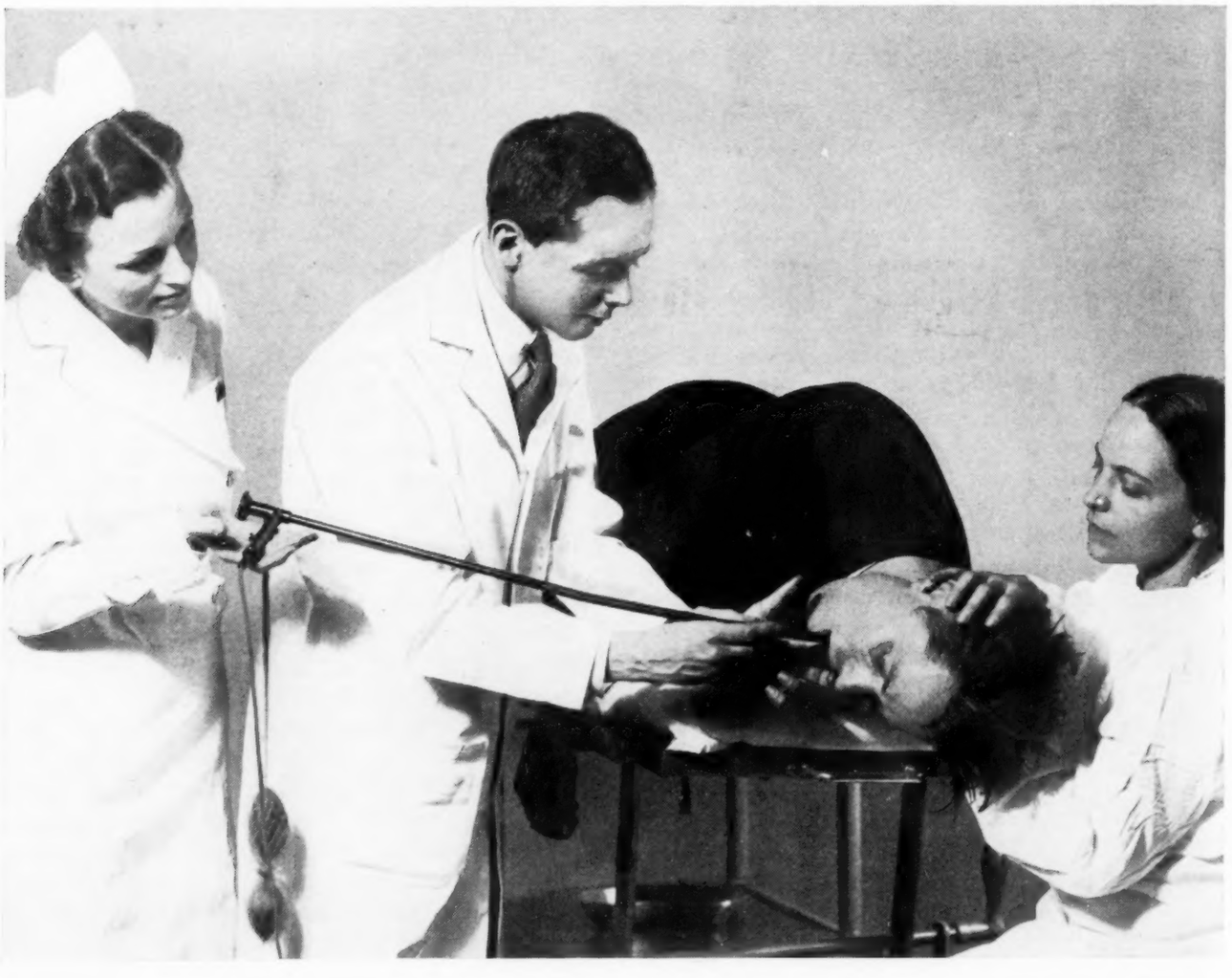
knife isn't necessary, thanks to the flexible gastroscope.

Let's look on while its inventor, Rudolph Schindler, uses electricity, glass, rubber and metal to plumb the secrets of nature.

First, the patient is given an injection of codeine and atropine to lessen coughing, gagging and salivation. With a perforated tube, a device suggested by his 11 year old son, Schindler sprays her throat with a local anesthetic, pantocain. Then he siphons out the contents of her stomach and tells her to lie down on her left side, the position that will give maximum visibility. When all is ready, he inserts the gastroscope into the right corner of her mouth and commands her to swallow hard. Mrs. Schindler, who has been her husband's assistant since he began experimenting twenty years ago, gently moves the patient's head back and down, thereby easing the passage of the tube.

The tube is 2½ feet long and a little thicker than a pencil. The end of it which is now in the patient's stomach is tipped with a rubber finger, which helps to guide it. This flexible rubber tip is important. As a recent development, it has widened the gastroscope's range and enormously increased its safety. Above the rubber tip is a metal container enclosing a tiny electric light bulb, which throws its rays through a glass eyelet. A second eyelet, directly above the first, receives images reflected from the stomach walls and transmits them through forty-eight lenses set in a flexible rubber tube to an eyepiece, which is about where the handle of the sword would be if the patient were a sword swallower. The lenses are so arranged that the images reach the eye without distortion even when the tube is sharply bent.

The doctor turns a switch and peers into the eyepiece, meanwhile pumping air through the tube into the stomach with a rubber bulb. If the stomach were not thus inflated, its baggy, folded sides would touch the gastroscope, and nothing would be visible. And at first he sees nothing. But suddenly, as more air is pumped



A patient has his stomach examined by means of the gastroscope. The man has been prepared for this procedure by a drug which lessens gagging and salivation.

into the stomach, its walls leap into sharp focus.

You may say that there is nothing you less want to look at than a stomach wall. But if the stomach is healthy, it is a fantastic and beautiful sight. The membrane is a lovely orange-red and at its brightest during digestion. Smooth, glistening, with shadows and highlights, it looks like a subterranean cavern all aglow. Here is a delicately twisted column, there a sort of stalactite, which is actually the muscle that controls the exit into the intestines, the pyloric valve. Hardly a decade ago this wondrous cave where originate all the mysteries of digestion was still largely unmapped. Doctors were unable, without considerable risk, to get a look at it in the living state. Autopsies were often misleading, for death brings swift changes to stomach tissue, as with the chameleon that loses its color when it dies. But the doctor is not admiring the landscape. He is manipulating the gastroscope, bringing one section after another into focus; he is watching for signs of abnormality and disease. Little streaks of brighter red may be the sign of hemorrhage. A cobblestone pattern, or a spot resembling Mother-of-pearl, is a serious warning. The walls may be eroded so that the blood vessels are visible. Benign, or harmless, tumors show up like sharp-edged caterpillars on the orange background. The dread, ragged, white or greenish growths of cancer, when well advanced, are as ugly as old barns on a country road.

The gastroscope's greatest service is early detection of these cancerous stomach growths, which can often be removed by operation if detected in time. Perhaps 40 per cent of all cancers are located in the stomach, which kill some 30,000 Americans every year.

When Dr. Schindler has removed the gastroscope from the patient's gullet, his job is done. He submits his decision to the patient's physician. In the case of this woman, surgery was feasible, and the growth was removed. Once again the gastroscope had spied the fearful killer in time.

The first man to look inside the living stomach was an American Army surgeon, Dr. William Beaumont, who in 1838 treated a fur trapper for abdominal gunshot wounds. The wounds healed in such a way as to leave a permanent fistula or peep hole from the outer world. Beaumont, consumed with scientific curiosity, hired the trapper as a walking laboratory and through this glassless window observed and described the actual workings of his gastric processes over a period of many years. The stomach's privacy was not invaded by medical men again until 1868, when a German intern, Adolf Kussmaul, inspired by the sight of a sword swallower at a carnival, rushed home, made a crude rigid tube and persuaded the sword swallower to gulp it down. Hopefully he held a lamp to the end in his human guinea pig's throat; but the light did not penetrate deep enough, and nothing could be seen.

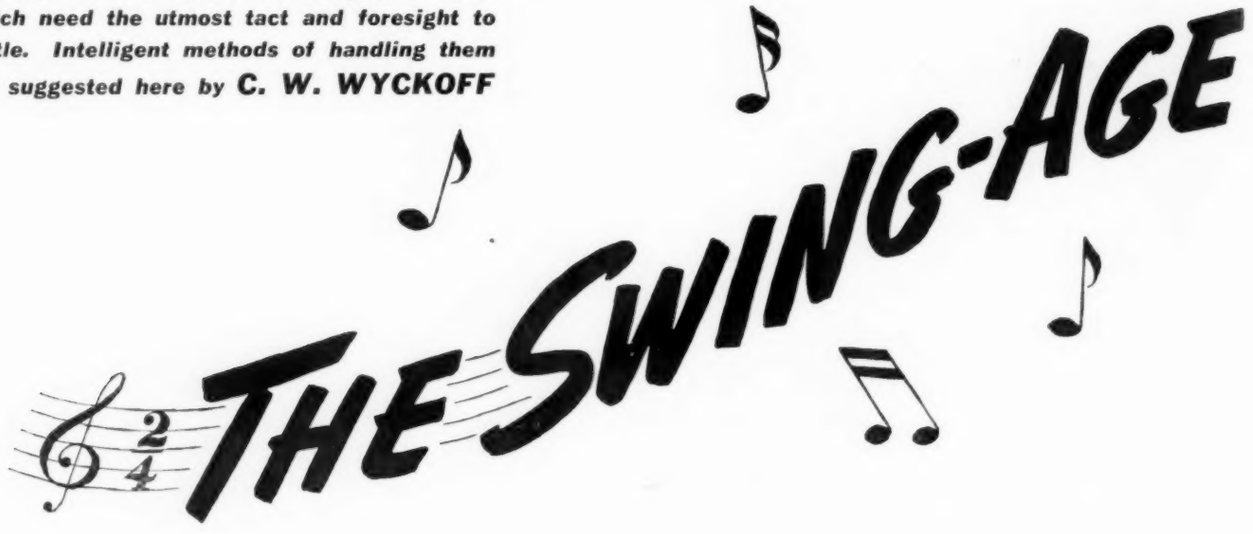
For a long time poor lighting facilities and imperfect lenses balked attempts to develop Kussmaul's brilliant idea. But after Edison's invention of the electric light bulb, some of the stomach's dark continent was mapped by means of rigid gastroscopes. At this time, there was some peril to the patients, for with a rigid tube the risk of injury to the stomach's delicate membranes or rupture of the esophagus was always present. At least one famous researcher, Mikulicz, was forced by fatal accidents to give up his experiments.

Jackson, whose bronchoscope had saved many lives by extracting foreign bodies from the lungs, put the rigid gastroscope to similar use. Equipping it with an Edison bulb and finely ground lenses, he spotted needles, thumbtacks or open safety pins carelessly swallowed and fished them out by means of a slender forceps passed through the tube. But even today this delicate and hazardous technic is used by only a few skilled practitioners. With the discovery of the x-ray, which accomplished such wonders and as a detective worked so much safer and easier, interest in gastroscopy languished.

However, the stress and strain and malnutrition of the World War brought into hospitals persons for whose stomach symptoms the x-ray revealed no cause. In 1920 Schindler, then a young physician in a Munich hospital, noticed that half the patients complained of stomach trouble. Yet using all the standard technic, he could find nothing anatomically wrong. Was it only hysteria, or would a closer look show real disease?

Schindler decided to have a look. Reviving the neglected technic, he salvaged an old rigid gastroscope. After 400 examinations, he had an accident, and the patient died. Badly shaken, Schindler discarded the clumsy instrument, but not its principle. The problem was finally solved by a German optician, Georg Wolf, who helped Schindler see into the stomach through a *flexible* gastroscope provided with many lenses at short intervals. As a result of his development of a gastroscope that was safe, fairly com- *(Continued on page 271)*

The path of the modern parent is strewn with pitfalls, for vital questions frequently arise which need the utmost tact and foresight to settle. Intelligent methods of handling them are suggested here by **C. W. WYCKOFF**



THE YOUTH of fifty years ago at 18 or 20 years of age was settling down to family life, had a supporting occupation and was performing civic duties. Today he is more dependent on parental aid; he does not seem mature enough to settle down. Yet, he is decidedly more worldly wise, more experienced in social life, more educated in the way of sciences, arts and letters than his counterpart fifty years ago. But he is less familiar or less cognizant of the Bible and religious teachings. What are the effects of these things on his character, his personality and his citizenship?

The Swing Age Youth is the product of the world happenings since the beginning of the twentieth century. He is a victim of circumstance. His future is made, marred or ruined by the following factors: parentage; body growth and development, and training.

Parents of today are called the middle generations, that is, between the Puritan generations and the modern age. We are the last of those children held responsible for their own shortcomings and the first parents to have the responsibility for the actions of their progeny. Children have more right, certainly, to demand good parentage than we parents to demand good children. Parents should observe, first, the proper hygienic care of their children's bodies by having a physical examination for them at least twice a year by a physician and dentist. Second, the parents' home behavior should be exemplary; third, a proper religious attitude and performance should be maintained; fourth, they should exhibit correct social behavior; fifth, their home should be given over to the children rather than to the display of furniture, and sixth, there should not be too many outside interests to take the parent's time away from raising the children.

Regarding body growth, the standard of the normal modern child is not measured in terms of weight or height or intellectual ability but of soundness of body and mind, harmoniously developed physically, mentally, emotionally and consistent in developmental progress with his years. The infant's body growth goes through more profound changes than it will ever encounter again in so short a space of time. When considering standards of growth, we must keep in mind body types. Children's bodies follow more or less their ancestral architecture. Some are lean and lengthy, some are short and plump. You cannot force, feed and attempt to fatten and lengthen the temperamental little human animal, as is done with the placid domestic animals.

About the time of puberty, special hazards arise due to the altered character of growth. The thyroid or pituitary or sexual glands may not function well. Because of immature tissues the adolescent fatigues easily; therefore, sufficient sleep at this time of life is more important than at any other period. Also because of these immature tissues, the individual who partakes of competitive athletics, should be watched carefully by a competent physician.

As to development, this is the advance toward maturity of mind and body through nutrition and secretions of the endocrine glands. The gradual control of the body by the brain itself is a maturing process requiring several years. In fact, complete control

YOUTH

Stephen Deutch

over nerve reflexes and emotional responses is rarely attained even in the mature adult.

The training of the Swing Age Youth has no book of rules. Traditional training has been outmoded because times, customs and living conditions have completely changed. We must consider ourselves entirely different types of individuals from our children. We are supposed to be mature, experienced adults; they are immature, inexperienced children, not young adults. We think along entirely different lines from them at all times.

Because of the changing times and the many inventions in the past four decades we parents have become decidedly altered in our life attitudes, compared to our early training and habits. Our home life is entirely different. The church is no more the main social center. Yet human stock is still true to our well intentioned forefathers, or the Swing Age Youth would be far more difficult to manage than they are.

Parents must learn and become familiar with the child's developmental schedule in advance,

in order to be ready with their aid and encouragement as the changes appear. At about 2 years, the child's personality takes form, and by enforcing some rigid routine at this time you can easily distort his personality. If the child's daily life is completely supervised and dogmatic, it tends to regiment him and submerge his individuality. As he grows older, the current stress on prolonged prescribed education further thwarts his originality.

The child must be helped to imitate the best in social groups, in literature, from the radio and in the motion picture. He should be gently but firmly discouraged from imitating that which lowers and degrades the character.

As to punishment during the early childhood period, don't regard it too seriously. Don't demand that the child behave like an adult. But if he defies you in some respect which he knows is wrong and in which he has been previously asked to do differently, inflict an intelligent penalty. Don't threaten punishment, and let it go at that. He gradually loses respect for your authority, as well as every one else's.

The adolescent may often aggravate and exasperate you, but he will educate you in your self control. The wise parent requests obedience only when it is a matter of importance to the child. Never give commands, never give requests in an irritating manner. Suggestion is a most influential factor. Parents disapprove too frequently in matters of little importance and have nothing left for emphasis when big decisions arise.

The adolescent bark is worse than his bite. He is really timid and conceals it by an air of braggadocio.

Regarding smoking, of course there is too much of it among our young adolescents. It is a most harmful habit, for its deleterious effects on the nervous system cause emotional instability and inferior mental concentration. As to drinking of alcoholic beverages by our youth and maidens, certainly this should be strictly forbidden until the growing body has matured, which brings them well past 21 years.

You desire in your children good character; this means upright morals and a high ethical standard. You desire in them a good personality, which means sufficient self respect but a proper control of it to prevent egotism. It also includes his actions toward his fellow man, sanely governed by the feelings and needs of his fellow man. Both character and personality are seriously influenced by the child's associates and his home. Be familiar with his associates; invite them to your home to judge them.

Our American homes and our country have been established on a wholesome religious basis. Every home in these troublesome days, if our civilization is to survive, must manifest a constantly active interest in religious matters.

The modern parent must anticipate early the moral exposure and temptations in the child's life and impart proper information regarding sexual matters and vice at the time in the child's life when his physical growth and mental development are ready to assimilate such knowledge.

The Swing-Age Youth's lack of cumbersome clothing is beneficial by allowing the greater freedom of body movement and body ventilation. The young of today are much less body conscious because of less clothing.

The present day generation is supposed to be more disrespectful of its elders. It is probably no more so than in bygone generations, but the child has the honesty and the audacity to manifest it.

The irresponsibility of the modern child is explained by the fact that he is made dependent for too long a period during his adolescence. He or she should have an opportunity to earn money by their own physical or mental efforts, to sell themselves to the public! This develops personality.

The great attention given to the modern child's physical care and development, exercise and disease prevention is improving the stock. Young people of today in the more civilized lands are somewhat taller, larger and better developed than in previous generations.

Educationally, our Swing-Age Youth is much advanced over a generation or two ago; but there is such an urge for speed to cover so many subjects and such intellectual competition that many times the thinking powers in these young brains are shattered. Thoroughness, accuracy and recollective thinking are far too little emphasized in our school curriculums.

For the parent to know how to handle the adolescent age, it is absolutely necessary to begin his training in the period before his child reaches adolescence. He should have an intelligently planned method or procedure. When it comes to the explanation of the origin of life, the changes taking place in the body in the pre-adolescent and the early adolescent or puberty stages and the changing sex thought in the late adolescent periods, it is most imperative that the parent know the age at which such changes occur.

As a part of nature's plan, the typical adolescent begins early in that period of development to experience sex *(Continued on page 250)*

SAVING your FIGURE

By observing a few simple principles of posture, the mother-to-be can assure herself of her former good figure, says

CHARLOTTE R. WELSH

Mary has always stood correctly: The pelvic and chest ovals are well balanced, for a line can be drawn from ear to ankle.

Therefore, Mary's baby carriage is good. The weight of the fetus rests in the pelvic bowl, which is designed to hold this burden.

THE IDEA that motherhood usually ruins your figure for the rest of your life has accompanied corsets and stays (which probably had a great deal to do with bringing about that belief). However, a great many women still attribute their bulging outlines to little Tommy or Mary, and the martyred declaration that, "I sacrificed my figure for my children," is still a common feminine fallacy.

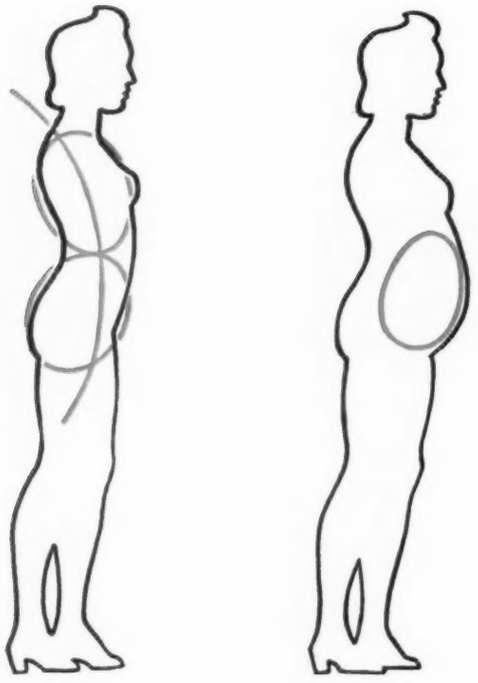
It isn't necessary for any of the bulges to remain long after baby arrives. On the contrary, child bearing should improve the average woman's figure, which is usually too "hippy" in proportion to the smaller measurements above the waist. If your hips measure 2 inches larger than your bust, they are in good proportion. But any measurement above 4 inches larger than the bust must be considered on the heavy side. Having babies need not enlarge your hips, unless you allow unnecessary weight to accumulate and stay, but it usually does develop the bust line and bring the waist into better proportion.

Maternity should, and usually does, improve the posture. Unless, of course, you use it as an excuse to let a lazy slouch get the better of you. With these two factors, a good posture and good proportions, the mature maternal figure is usually better than that of the woman or girl whose lines are not completely developed by maternity.

Look at Mrs. Joseph P. Kennedy, wife of the American Ambassador to England and mother of nine; and there is beautiful Marina, Duchess of Kent, mother of a little prince and princess. These two women possess two of the best figures to appear in the news picture pages. The way they stand and the way they wear their clothes catch your eye and create an impression of grace and beauty. The way they carry themselves is the secret. Attractive carriage is good posture. It is the key to bodily grace before, after and during pregnancy. A pregnant woman need not be awkward. The way you carry yourself determines the way you carry your baby. And you can carry it with ease and comfort, if your posture is good.

The female body is a series of three ovals increasing in size from top to bottom. The male body on the other hand, has the largest oval in the center—the rib cage. His pelvis is not designed to carry any extra burden.

It stands to reason in both cases, however, that the body is easier to carry around if these ovals are balanced on top of each other with the center of gravity directly under all, than if one were wobbling out in front and one sticking out behind. It's important for both



Jane normally has the sway back posture. She has heard some one say, "Throw out your chest!" So she is the type who develops that peculiar gait common to expectant mothers. The weight of the fetus is thrown against the abdominal muscles.

men and women to get these ovals balanced; but it is especially important for women because their bodies are designed for special burdens not only during pregnancy but during the regular monthly cycle when the uterus is swollen during menstruation.

Authorities now believe that poor posture is responsible for some of the pain experienced by some women during their monthly cycle, as well as most of the awkwardness and discomfort during pregnancy.

There are three factors to be considered in keeping a good figure after you have had your children:

1. Keep down the body weight to a normal gain during pregnancy.
2. Maintain a good posture before, after and during pregnancy.
3. Take special exercises to bring the uterus back into position after the birth of the baby.

Many women use pregnancy as an excuse to develop an uninhibited appetite. "I'm eating for two," you hear them apologize. This is not entirely true. It is necessary for them to get enough protective foods, such as minerals and vitamins, and enough protein to furnish their own supply as well as that of the new little body that is being formed; but twice the number of calories previously eaten is not necessary, nor is twice the amount of carbohydrates and fat. It isn't necessary for any woman to gain more than 15 or 20 pounds above her normal weight—the combined weight of the fetus and the placenta.

When she steps on the scales after leaving the hospital, she should weigh no more than before her pregnancy started. And what a wonderful feeling it is to have that normal weight back again and not have to start dieting, when the new baby needs, more than ever, an adequate diet on the part of the mother.

Most doctors advocate a well balanced, normal diet, moderate outdoor exercise and plenty of rest as the ideal condition during pregnancy. Don't change your way of living, if it is healthful. Instead of eating more, sleep more. The craving for certain foods and a ravenous appetite may be an excuse to let your eating go undisciplined. When you feel like having a cigaret, take a walk around the block. It is much better for the baby.

After you leave the hospital, it will be easier to get that bulging tummy back into shape, if your weight is back to normal.

Now as to posture. If you haven't practiced correct posture all your life, during your pregnancy is an excellent time to start. You will be particularly conscious of yourself during this time, and it is much easier to "think straight." Because, if good posture hasn't become habitual, it can be made so by a conscious effort. Also the space below your ribs will become pretty crowded with that little body that's growing and stretching out every day, and it will be so much more comfortable to hold up the chest than to let it sag. It will also relieve you more to carry your hips "under" you than to let them protrude in the rear like a caboose following a train, because this large oval, your pelvic cavity, should carry most of the weight of the fetus. If your hips stick out behind, your tummy sticks out in front, and the weight of the baby falls into the muscles of the abdomen instead of resting squarely in the bones of the pelvis where it belongs.

If you don't know how to stand up correctly, and most people don't, remember that good posture can be achieved by tucking your hips in under you—this automatically brings the tummy in—and raising the chest at the same time, which brings the head up. In other words, balance the ovals on top of each other.

"Stand tall," is an easy formula for a good posture, but don't let this confuse you. Sometimes a sway back or exaggerated lordosis curve is the result of what you consider standing tall.

If you have trouble achieving a correct posture, here are some exercises that will demonstrate it to you

First: Stand against a wall touching the heels, head and hips. Move heels out about 6 inches, and touch the small of your back to the wall so that there is no space between you and the wall from your hips to your shoulders. Now try to move the heels back to the wall, maintaining this position. When you have done the best you can, try walking away from the wall holding this position of hips and back.

Second: Stand with shoulders, head, hips and heels to wall. Move feet out a foot or more from the wall. Keeping head on wall, move hips out, then stand erect without using hands to brace yourself. This will put your body in excellent posture. Hold this posture as long as you can.

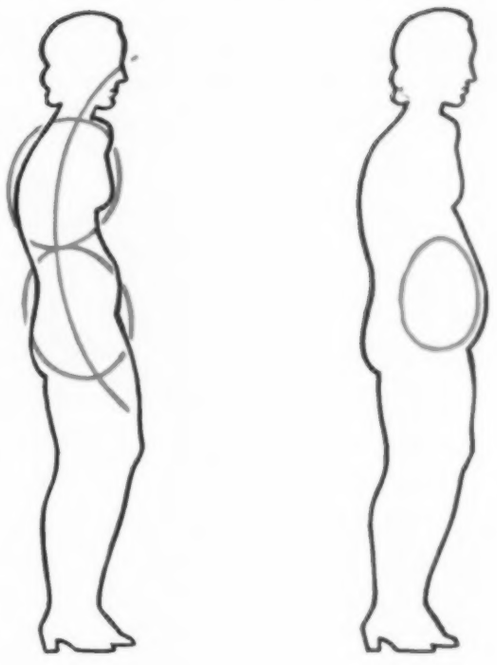
If you maintain good posture during your pregnancy, you will hear people saying, "My, but you carry your baby well, I can hardly tell you're going to have one." Also you will be less tired and much less awkward. It helps a lot to do away with that particular walk so common to expectant mothers. The stomach is thrust out, the head thrown back and the hips sway from side to side in back.

Remember while you are carrying your baby, sit straight and stand straight all the time. Don't sway your back, as this only causes extra strain on the back and stomach muscles and does not improve posture. You will find that after your baby comes, your posture will have improved.

After the birth of the baby, your doctor will probably recommend a series of exercises. If no abnormal condition exists, there are several safe exercises that almost every woman can take after leaving the hospital.

The knee-chest position is a passive exercise advocated for this time as it is useful in getting the uterus back in place. It is also recommended for cramps or painful menstruation. Get down on your hands and knees on the floor, keeping the thighs vertical to the floor, and try to rest your chest on the floor. Maintain this position as long as you can. Start with a minute at a time several times a day, and work up to 5 minutes.

Another exercise begins by lying flat on the back. Contract the stomach to the count of two; relax it while you count two, and extend it for two counts. Pull in—re-lax—let go. Do this ten or twenty times, rhythmically, for rhythm is the secret of successful exercise. Some doctors suggest doing this exercise with a book placed on your abdomen. Gradually increase the weight of the book until you are lifting the family Bible on your stomach.



Betty has a lazy way of standing. Her head is forward, her chest flat, and her stomach is out. So her baby carriage will make her feel continually fatigued. Her posture, which is poor anyway, is now exaggerated.

Then there is the series of exercises done while lying flat on the back and raising the legs in different positions. Try slowly raising both legs with knees held straight, until the legs form a right angle with the body. Raise slowly to the count of ten. Lower to the count of ten. Do this only once the first day; gradually increase until you can perform this exercise five or ten times.

Raise both legs to form a right angle to the body. Describe a circle with the legs, knees held straight. To the left and down to the floor, to the left and up again; do this several times. Now to the right, down and up. This is excellent for stomach, waist and hips.

Before and after the baby is born, walk and walk. Always maintain good carriage of yourself. Head up, chest up, hips in and stomach in. Sit that way, too.

***INFLUENZA and PNEUMONIA** together rank second among the nine greatest killers of the human race. Herewith is presented an understandable summary of what medical science knows about their prevention and treatment,* **By JESSE G. M. BULLOWA**

Deadly Disease

OF THE nine causes of death which were responsible for 72 per cent of all deaths during 1937 influenza and pneumonia (all forms combined), ranked second as a cause of death. Influenza and pneumonia are grouped together properly, because most of the influenza deaths are caused by pneumonia produced or associated with the influenza.

Influenza and the common cold, both virus diseases, prepare the way for the bacterial infection of pneumonia. These viruses cause congestion and inflammation of the mucous membranes of the nose and lower respiratory passages so that they are prepared for the reception of microbes. As a result of the inflammation, there is an increased amount of mucus which may trap the microbes and keep them in contact with the tissues so that they cause disease.

We know that microbes only develop from other microbes of the same kind, so a patient has pneumonia with a particular kind of pneumococcus [specific germ causing pneumonia] either because it has been carried to his respiratory passages from the discharges of another patient or from a carrier of the germs. Persons who have been in close contact with pneumonia patients frequently become carriers, and they spread the disease either by the discharges which come as droplets from their respiratory passages or with their hands contaminated by discharges. Disease germs then pass to the hands of others who convey them to their own mouths. Nurses, doctors and attendants sometimes acquire this disease or may be carriers of it.

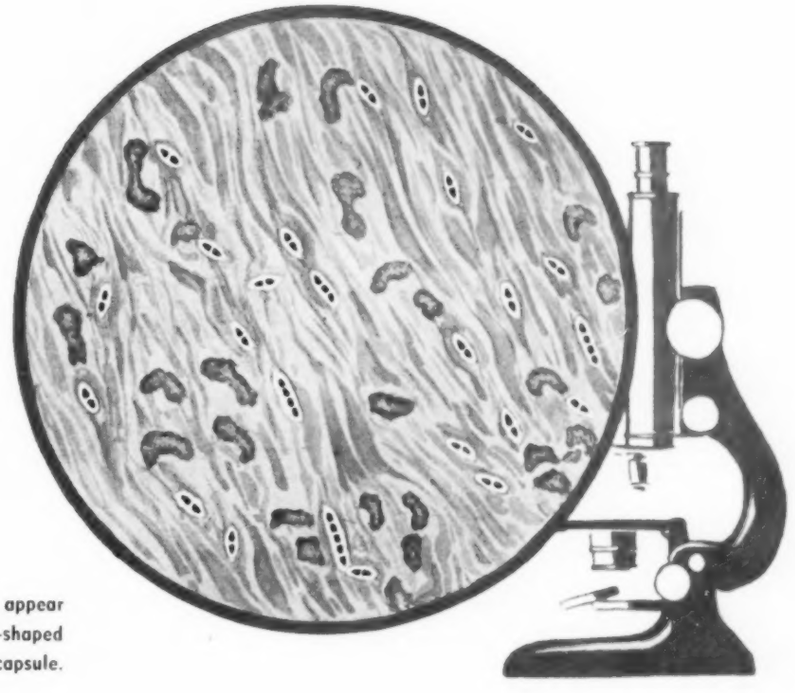
For purposes of treatment or of determining the mode of spread to others, a precise determination of the cause of inflammations in the lungs or pneumonias is necessary. This can usually be made by a bacteriologic examination of the discharge from the lung or sputum or from the blood. The bacteria are found and classified appropriately. In many cases when we know the cause of the pneumonia and take other circumstances into account, we can both foretell the probable fate of the patient and influence it by the employment of specific treatment such as serum or chemical therapy. Grouped together under the classification of influenza and pneumonia are diseases with inflammations of the lungs caused by a number of bacteria and viruses.

I once saw a patient who had pneumonia due to Pneumococcus type V in the right lower lobe of her lungs. During convalescence, she visited with a patient who was just recovering from a pneumonia due to Pneumococcus type VII. The next day the first patient's temperature rose, and she developed a pneumonia of the left lower lobe due to Pneumococcus type VII.

Pneumonia is a communicable disease, spread by contact; the attendants should employ much care to avoid infecting the patient with the microbes they carry as well as avoid becoming carriers of microbes harbored by those they serve. This requires an extremely careful nursing technic. It is well known that pets may be carriers of disease, and so they should be excluded from sick rooms.

Pneumonia is a disease of crowds, and crowding gives an increased opportunity for spreading the disease. The closer and more frequent the contacts, the greater is the chance of transferring as well as of acquiring these diseases. It is wise to avoid crowds when epidemics are prevalent and especially to avoid them when one has a cold or grippe. There

Number 2—

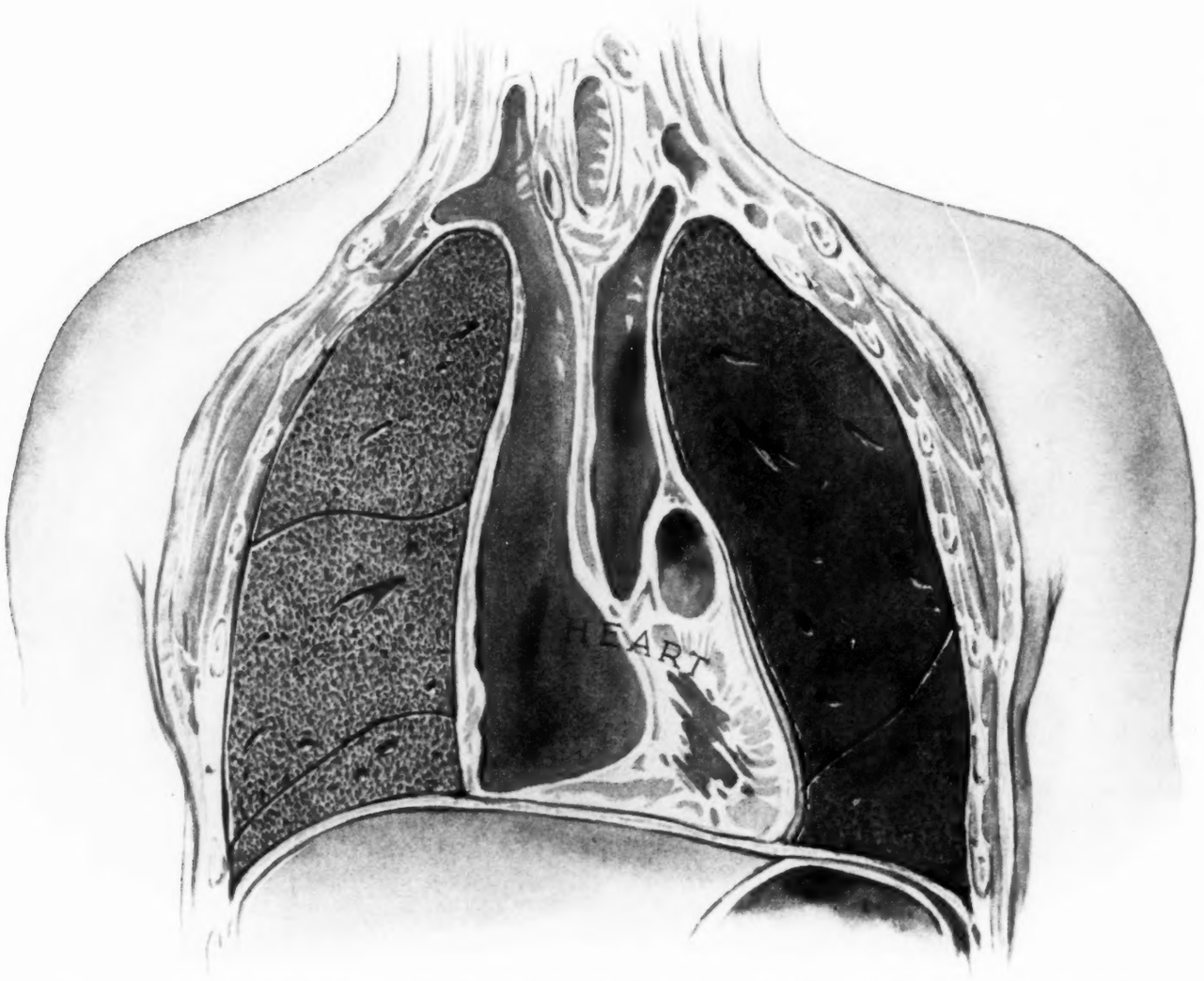


Under the microscope, pneumococci appear in pairs or in chains of lance-shaped berries surrounded by a shell or capsule.

are other factors involved in resistance to disease. The body may overcome mild infections or infections which involve few organisms. Age is an important factor, as may be seen from the instance of influenza and pneumonia deaths according to age. The exact reason for the loss of resistance with advancing years is not known. No one knows why more men acquire pneumonia than women, or why women are more vulnerable when they acquire the disease. It is not understood why certain pneumococcal types occur more frequently in women and others more frequently in men, nor why certain other types occur more frequently in children. Excessive use of alcohol increases susceptibility and diminishes resistance to pneumonia as does fatigue, exposure and privation. It is known that damp, cold feet cause changes in the circulation of the upper respiratory passages which favor infection.

Good nursing is, as it always has been, a necessary aid to recovery. The patients are so weakened that they must not leave their beds or unduly exert themselves. The pneumonias are communicable and precautions to prevent the spread of the disease are the responsibility of the physician and the nurse. Symptoms such as restlessness, pain and distention and complications must be watched for and alertly treated. The outcome in pneumonia often depends on the training, skill and devotion of the physician in charge of patients suffering from pneumonia, as well as the nurses he directs.

A previous attack of influenza or pneumonia often protects the patient from the disease, unless the factors which reduce resistance are great or unless a different variety of influenza and pneumonia is prevalent. Temporary protection is conferred by injecting antibodies [specific substances which aid in combating a disease] vicariously produced in animals. But, unfortunately, the antibodies remain in the body only about three weeks, so that such injections would only be useful in or immediately before an epidemic of the same kind of disease. The injection of foreign protein may sensitize the body to it so that the injections cannot be repeated. We know that the tissue mechanisms which induce production of antibodies may be exercised by injecting weakened or dead agents of disease, and then they will react more effectively when called on. In the case of virus infections it is necessary to use



The lung at right is solidified by pneumonia; the other side, therefore, must supply oxygen for the needs of the entire body.

living material, and this may get out of control. It has not been possible as yet to immunize the body actively against all kinds of specific pneumococci and streptococci which cause pneumonia. Felton of the U. S. Public Health Service is attempting to obtain a substance from pneumococci which may induce antibody production for all types of pneumococci in men. It is known that when the tissues have once produced antibody for a pneumococcus, they are more likely to produce it again when the need arises, even for a different variety. But the data thus far compiled are not conclusive.

Many patients who contract pneumonia get well of themselves; pneumonia patients differ in their resistance to the microbes causing the disease, and these microbes differ in virulence. It may indeed be difficult to say what the effect of a remedy is and which of two remedies is the better under these conditions. However, we are able to determine that a specific remedy has a specific effect and to state, with a reasonable degree of certainty, that one remedy lowers the mortality either to a greater extent than another remedy or to a greater extent than none at all, if the patients in the several groups of compared cases are similar in respect to the factors known to determine the severity and death rate of the illness.

In such compared groups of patients, one remedy may cause a lower death rate in one of the groups. The difference must be of such magnitude that it could not be due to chance differences, as determined by good methods of testing statistical significances. The factors determining death rate are the age of the patient, the virulence of microbes, the duration and extent of the illness prior to treatment and the character of accompanying diseases. However, we do not know whether the patients in one group who received a remedy and died were the same as those who would have died if they had received another remedy. It has been well established that fewer patients succumb under chemical ther-

apy [administration of drugs] and under serum therapy [injection of antibodies] than without either of them. Both reduce the death rate to one quarter of what it is when no specific remedy is used. There are conditions in patients when one remedy may act more favorably than the other, and we must query whether more patients would recover with both remedies. Though there may be a better remedy for the majority of patients, we must consider whether there is an appropriate remedy for a particular patient. Under some conditions one remedy may be harmful or contraindicated. If we understand the precise action of each remedy, we will know its use. Accordingly, we must understand how the pneumococci and streptococci affect the body and the action of each remedy on the disease.

When one is invaded by pneumococci after being prepared by a common cold, influenza or other condition, the body responds with a congestion in the lungs, a collection of cells in the alveoli or air sacs of the lungs and escape of serum through the capillary walls. The number of white blood cells in the blood is increased, and different antibodies for each kind of pneumonia are produced. These substances neutralize the poisons dissolved from the pneumococci.

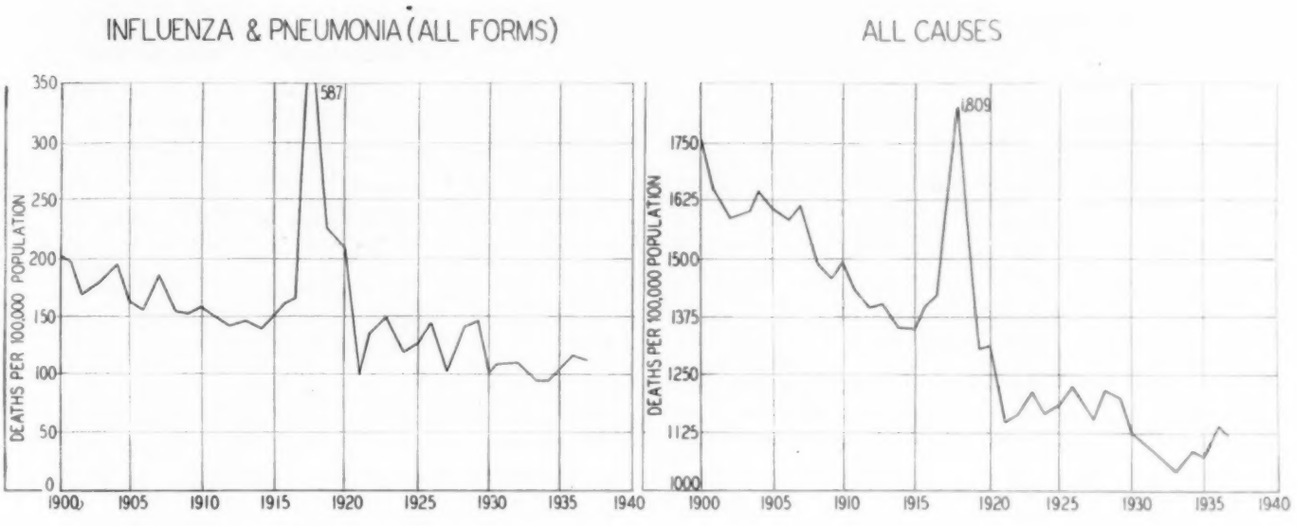
Under the microscope, pneumococci appear as pairs of lance-shaped berries surrounded by a shell or capsule consisting of carbohydrate, or starchy substance, which is different for each type of pneumococcus. Without the pneumococcic bodies the carbohydrate is relatively harmless, and the bodies are relatively without virulence unless carbohydrate or capsular substance is present. Each seems to make the other more potent.

Each kind of capsular carbohydrate determines and produces in the patient or animal the character of antibody necessary to neutralize it. The antibody and the capsular carbohydrate must match, just as a key must fit into its proper lock.

As the result of the accumulation of antibodies, toxin is neutralized, the capsules of the pneumococci become swollen, and the pneumococci lose their virulence. As the result of the swelling of their capsules, the pneumococci are so changed that the leukocytes may engulf them, or they are dissolved in the presence of substances which develop in the diseased lung. When a sufficient amount of these necessary antibodies are present, the patient is unpoisoned, the pulse becomes slow, the temperature is lowered, the excess number of leukocytes leaves the blood stream, and the patient is well. After injections of adequate amounts of specific antibodies into the blood stream, a similarly beneficial effect is observed. For serum therapy, the required antibodies may be produced in horses or rabbits in response to repeated injections of killed pneumococci. The blood of such animals is collected, refined and concentrated and the antibody strength measured. By injecting the refined serum, the conditions which occur when patients recover of their own effort are brought about quickly and without delay. The inoculated animals make the necessary antibodies for us.

The use of serums has certain drawbacks. The serum used must match exactly the special

DEATH RATE TRENDS - UNITED STATES 1900-1937



type of pneumococcus responsible for the disease. When pneumococci are abundant in the sputum or are present in the blood, typing is readily accomplished. The capsules swell when brought into contact with antibodies of the specific kind and number. Sometimes it is difficult to find pneumococci for typing in the sputum, and in that case the sputum may be injected into the abdomen of a mouse. A few pneumococci will multiply in three or four hours, and then they can be found and typed. Another method of therapy is particularly desirable for those cases in which there is difficulty in determining the causative agent. The new sulfanilamide compounds which delay the growth or kill pneumococci and streptococci are available for patients in whom the infecting organism is not known or where serum cannot be used with safety for some other reason, such as sensitiveness to it. Sulfapyridine is at present the most potent of these compounds for the destruction of pneumococci. Unfortunately, these compounds, like serum, may affect the patient as well as the invading germ. Sulfapyridine acts on the body of the pneumococcus and not on the shell or carbohydrate, as does serum. In fact, the body of the pneumococcus may diminish in size or even disappear and the capsule remain. When exposed to sulfapyridine, the pneumococci frequently grow in chains and with distorted bodies and produce less capsular substance.

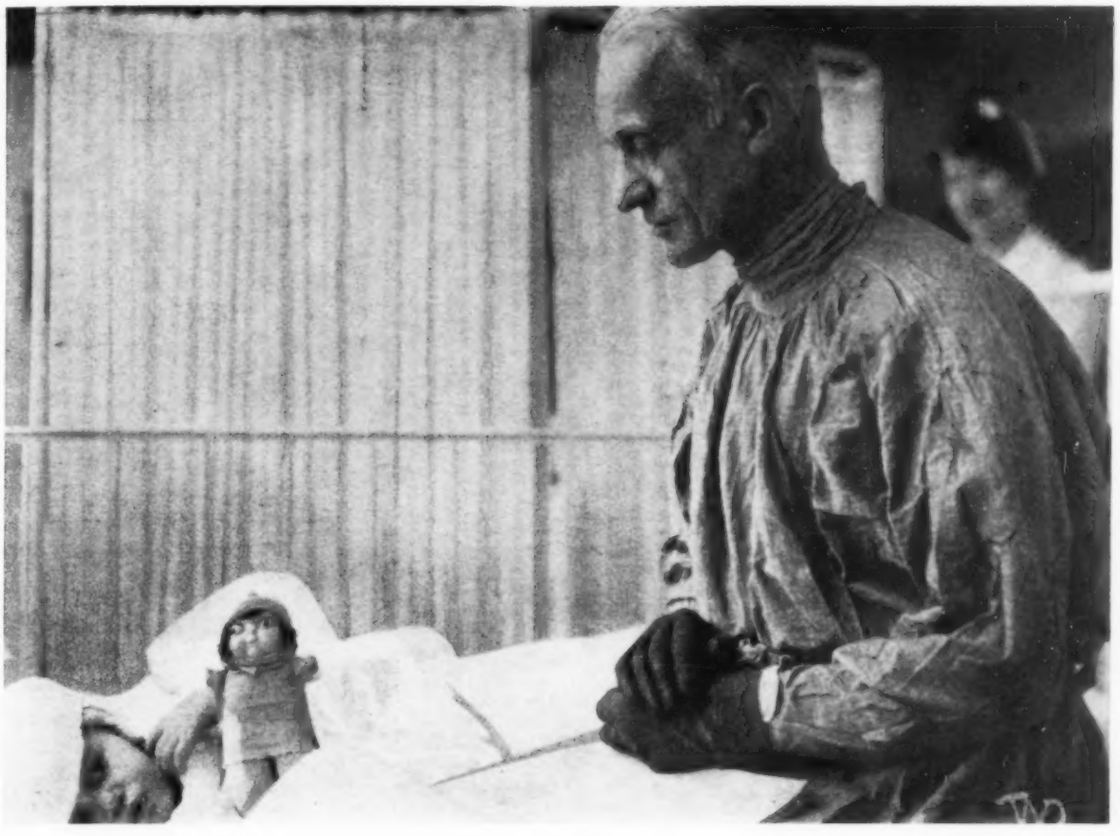
If the pneumococci escape the action of sulfapyridine, they may become more resistant, and a greater concentration of sulfapyridine will be required for their destruction than would have been necessary had they not survived the exposure. This resistance to a given strength of sulfapyridine is associated with a change in their metabolism and is shown by a loss of ability to use certain sugars. This sulfapyridine resistance, which may be acquired in as short a period as three days, is extremely important; it may persist and develop during the course of treatment. Sulfapyridine-resistant types are influenced by serum, and this is a strong reason for employing serum as well as sulfapyridine in severely prostrated patients. Should our common strains of pneumococci become sulfapyridine resistant, we may have to devise new drugs which can influence such organisms. The pneumococci must be overcome at once by a *Blitzkrieg* strategy [lightning war], or this remedy may have to receive the reinforcement of serum.

There are unfavorable effects from the utilization of sulfapyridine as well as from serum. In the course of the chemical action of sulfapyridine in the blood, products are formed which are both impotent against the organism and disadvantageous to the patient. Sulfapyridine frequently causes such nausea and severe vomiting that the drug cannot be used. Less frequently, such complications as measles-like eruptions or hemorrhages may occur. Many patients complain of an expanding feeling in the head and burning in the upper part of the chest or neck. In some cases, the circulating blood has been damaged, the red blood cells being destroyed. The bone marrow may be adversely affected either directly or through the liver, giving rise to a condition in which defensive leukocytes are not sent out from the bone marrow. Acute atrophy of the liver is another possible effect. Even after the administration has been discontinued, sulfapyridine, like other drugs containing the phenol ring, may produce high fever.

In the body the addition of acetic acid to sulfapyridine occurs with the consequent formation of acetyl sulfapyridine. After combination with acetic acid, sulfapyridine is less soluble and may be precipitated in the kidney tubules as hard, sharp crystals resembling uric acid. This may cause a damming back of urine, and if the crystals are washed into or deposited in the kidney pelvis or bladder, the acetyl sulfapyridine forms stones. Obstruction in the urinary tract may be responsible for the retention of the nitrogenous waste products of life, which may prove serious.

In choosing the remedy, we must bear in mind that serum therapy fortifies and accelerates the natural immunity mechanism, while chemical therapy weakens the invading organism. In the latter instance, cure ultimately depends on the development of antibodies and operation of the body's protective mechanisms. These may fail, so in such patients antibodies must be supplied. The patient may not develop sufficient antibodies to protect against a highly virulent pneumococcus and needs the assistance of chemical therapy to reduce its virulence. This may be determined in some cases by suitable laboratory methods. In many patients, the balance in favor of recovery may be produced by either remedy.

The use of a specific remedy is an important advance in the management of the pneumonias and is responsible in part for the reduction in deaths from pneumonias. Because physicians comprehend the nature of their problem, they are not using many remedies formerly employed. Faith has been lost in the value of whisky for pneumonia *(Continued on page 256)*



Dr. Harvey Cushing

A Prayer

At the Services for Harvey Cushing by the Rev. George Stewart

Lord, we now give back into Thy keeping,
This, Thy Son, Whom Thou hast entrusted to us
These many years.
How may we praise Thee as we ought for those qualities
Thou didst so richly entrust to him?
For fidelity to the tradition from which he sprang,
For the eagerness of student days promising the
Harvest of later years,
For his gay and resolute spirit,
His rallying courage that helped
Many to rise and try again,
For scientific insight, the gift and the art of healing,
For a generous hand
Which shared the best he had
With all who would receive it,
For sacrificial labors amid the alarms and
Thunders of the battle field,
And for lonely vigils
Known only to brave and consecrated servants of their kind,
For faithfulness to friends
For gentleness to the untutored and abashed
And stern appraisal of unwilling hand or head,
We give Thee praise.

For the deposit of diligence and knightly valor
He leaves in these ancient halls of learning,
So dear to him;
For the impact of his spirit
To arouse, direct and steady
A multitude of younger men,
The bright impress of his affection
Given to those of other faiths and tongues,
And humility when the heady plaudits of the earth rang in his ears
We give Thee thanks.

In the spacious field beyond our seeing,
Grant him employment of his every talent,
And fulfill any broken yesterdays unto Thyself.
Surround this family with the love
And trust of friends,
Buoy them up with the
Everlasting arms of Thy compassion,
And to Thee we shall give the praise and the glory
Through Jesus Christ, Our Lord.

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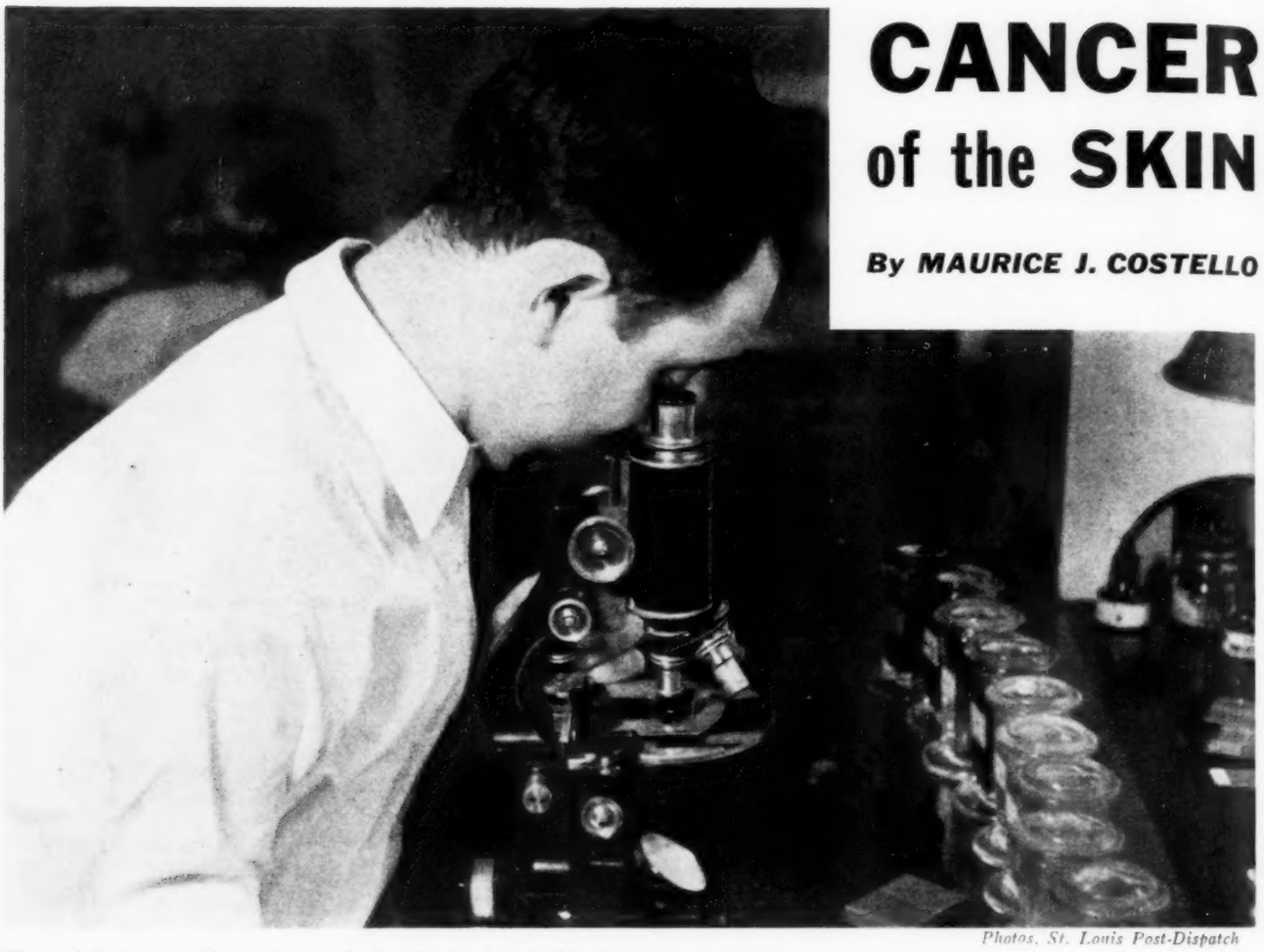
CANCER of the SKIN

By MAURICE J. COSTELLO



Photos, St. Louis Post-Dispatch

The pathologist can tell at a glance whether the tissue under his microscope is cancerous.

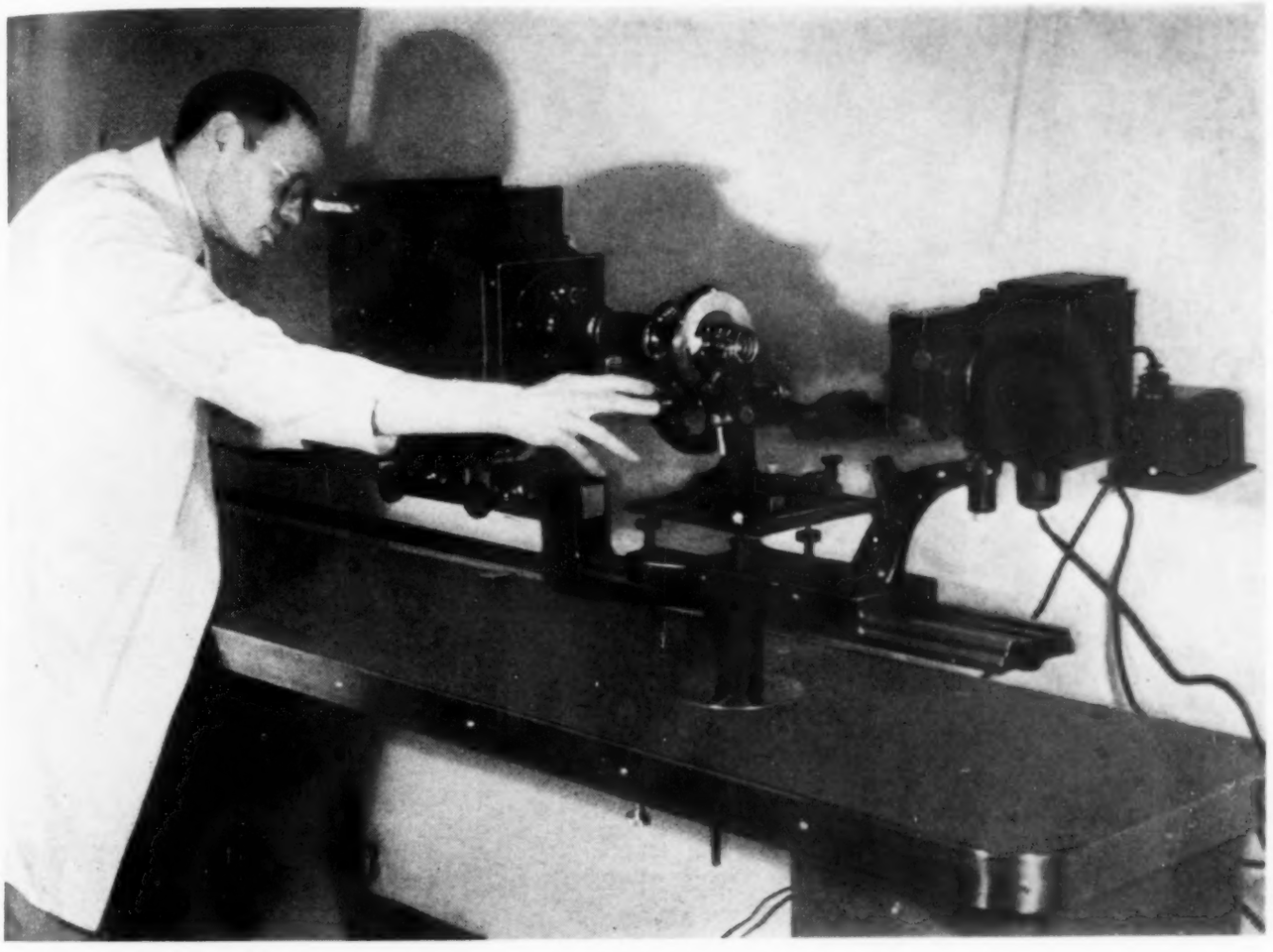
A CANCER is any type of destructive excessive growth of cells, irrespective of location or rapidity of development. It is neither infectious nor contagious. Chronic irritation is one of the commonest factors preceding the development of tumors and cancers. The skin changes that precede the development of cancer usually give the patient and physician sufficient warning of approaching danger. Lack of pain and a feeling of well being are the chief reasons why the danger signals are neglected.

The common conditions which may lead to the development of skin cancer are the senile wart, arsenical wart, scars, especially those following severe burns, and certain birthmarks, especially common pigmented moles.

Senile warts are seen in people of middle and old age. They occur on the face, neck and back of the hands of persons who have been unduly exposed to the elements, especially sunlight. Farmers and sailors are frequently affected, as are also persons of blond and sandy complexion, who never become tanned in spite of frequent exposure to sunlight. The senile wart begins as a small rough red spot, usually at the site of a freckle; it soon develops a horny brown or black adherent crust. The crust falls or is picked off, leaving a rough or bleeding surface, and forms again. This is repeated many times, and the chronic irritation occasionally leads to cancer. Senile warts may be single but are usually multiple. The outlook is good, if they are thoroughly eradicated by the electric needle, cautery, sharp curet [spoon], x-rays or radium. If neglected, or constantly irritated, skin cancer may develop.

There are warts resembling senile warts which are seen more commonly on the covered parts of the body, especially on the back, sides and front of the chest, as well as on the scalp and the face near the hair line. These are less likely to become skin cancers than the senile warts and are treated in the same manner, if they undergo suspicious change.

The prolonged administration of arsenic leads to the formation of arsenical warts, which do not appear until years later. They are small, rough, scaly warts on the sides of the palms, fingers and soles. They also give rise to skin cancer. Common warts as seen



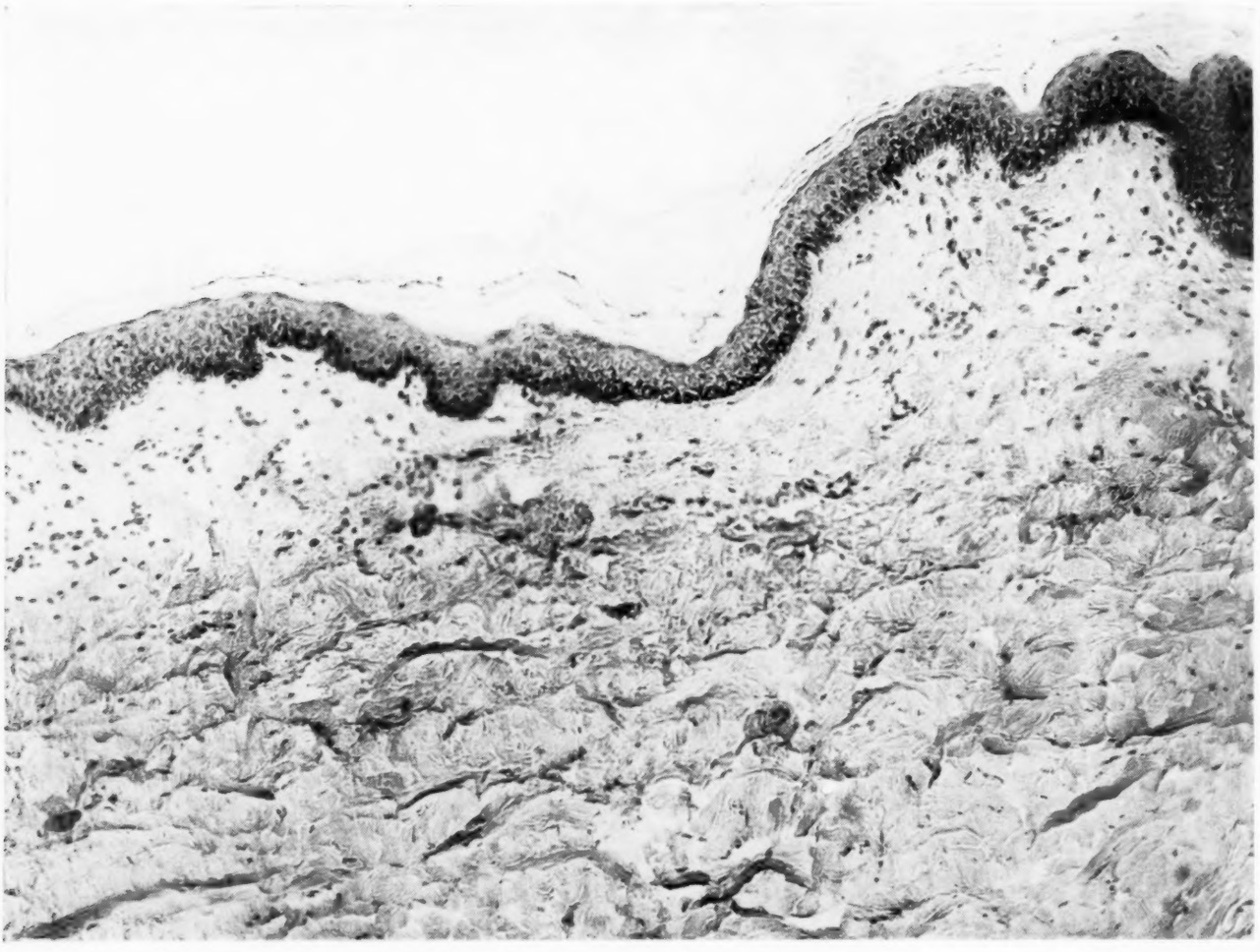
A specially constructed camera takes photomicrographs, which become permanent records of what the scientists see through a microscope.

in children and young adults never become cancerous.

Pigmented moles are an important source of skin cancer. The term mole usually refers to a small, pigmented or unpigmented birthmark which may or may not contain hair. Generally they remain stationary and never cause trouble. Most persons have one or several moles, which are usually only a cosmetic defect. The pigmented hairy mole should be left alone, unless it is in a location which is subject to constant friction from clothing or from shaving. When it is a cosmetic deformity, it may be removed safely by a qualified physician. There is a potentially dangerous type of mole which occurs most frequently on the head and lower extremities, especially the feet. This type of mole should be kept under frequent observation to determine its behavior, or else it should be surgically removed. It is small, slate colored or bluish black. The surface is smooth and flat or only slightly elevated, and it has no hair. Such a mole, if irritated or inexpertly or incompletely removed, leads to one of the most fatal types of cancer, the malignant melanoma. Increase in size, blackness and a beginning roughness are the danger signals which mean that cancer is developing. All types of moles, therefore, should command serious attention. When it comes to treatment, they should not be considered mere cosmetic defects. It is difficult enough for the trained physician to tell the difference between the various types of moles, and he alone should be consulted when there is a question of their removal.

Large scars following severe third degree burns or injuries are occasionally a source of cancer and are therefore considered one of the precancerous conditions. Any change from their usual appearance should be regarded with suspicion.

White patches, also known as smokers' patches, occur on the inside of the cheeks, the tongue and the lips. They are caused by the chronic irritation due to smoking tobacco or sometimes to syphilis. Smokers' patches begin as a milky film which in the course of time becomes thick, white and rough. They occasionally split, forming small lumps, at which time the beginning of cancer must be suspected.



Skin tissue as seen through a microscope. Heavy line is normally thin epidermis where cells grow evenly and in organized fashion.

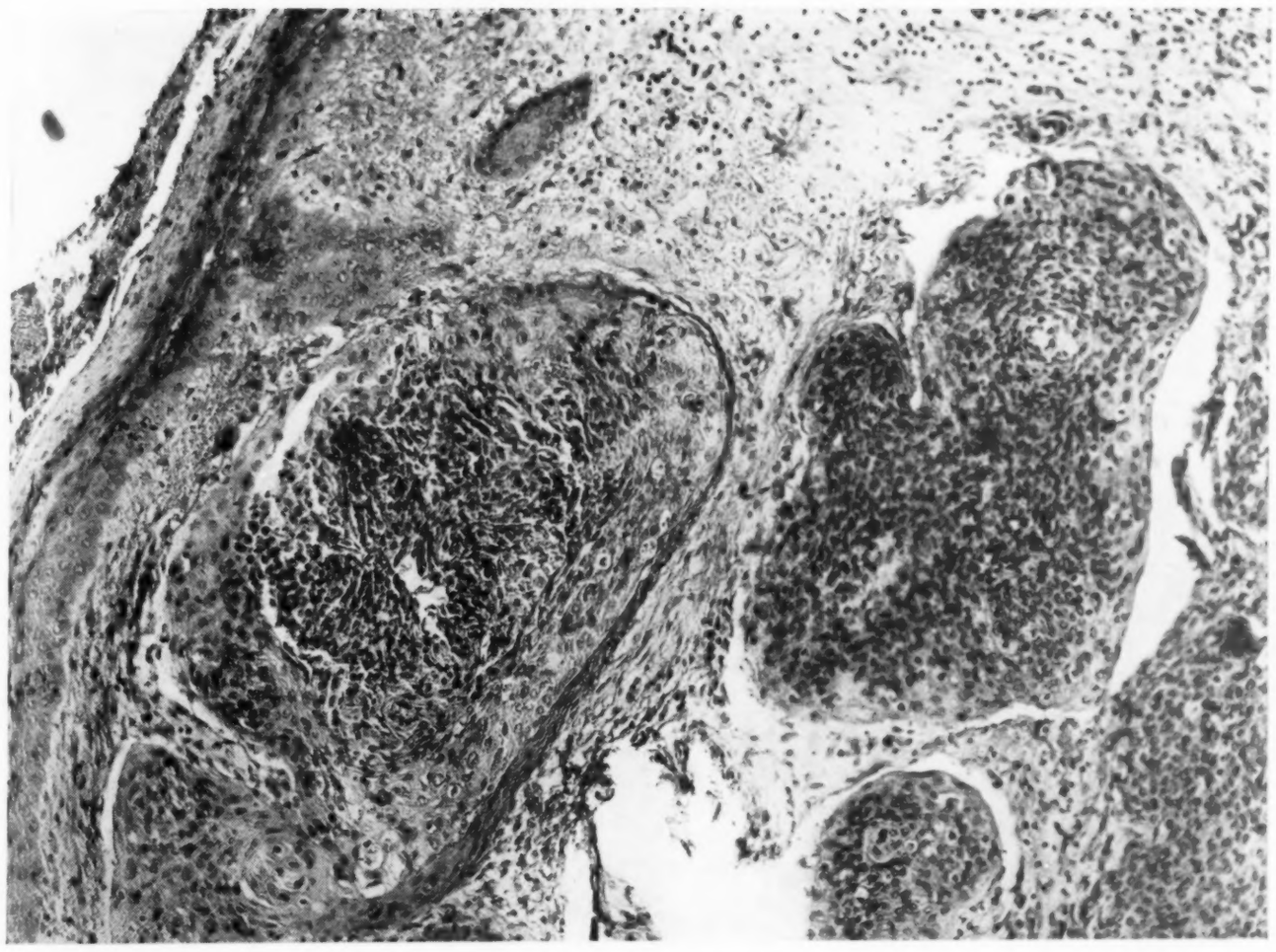
These mouth cancers form the most preventable group. The treatment of this serious condition is to remove all sources of irritation permanently, especially cigaret, pipe and cigar smoking. The patient should be kept under regular observation; jagged teeth and chronic dental infection should be corrected. Cancer of the side of the tongue has developed in persons over 40 years of age, who had sharp-edged teeth on which they were continually irritating their tongue. The white patches themselves should not be treated unless cancerous change is suspected. Nothing is worse than irritating, inadequate treatment.

Almost every case of skin cancer begins in pre-existing abnormalities of the skin and not from the normal epidermis.

An epithelioma is a cancer beginning in the skin or in mucous membranes of the mouth and is of two types. One is much more malignant [virulent] and spreads to the neighboring glands and other organs of the body comparatively early. This is the type which begins as the senile wart, the arsenical wart, the scars following third degree burns, smokers' patches and so forth. The other type of skin cancer, which occurs more frequently, is relatively benign or harmless, and it does not spread to other parts of the body. It is only malignant locally, as it destroys the skin just around its original site. It remains and grows slowly, without spreading to the internal organs.

The benign type of skin cancer begins either as a small ulcer, from which there is a slight discharge and a scab formation which drops off from time to time, or it may start as a small red lump which is brittle and is broken off by slight injury, as in shaving or picking. As it grows, it develops a pearly, wavy, elevated border with a crusted center, which bleeds occasionally. The malignant type, which eventually spreads to the internal organs unless treated, usually occurs on the mucous membranes of the tongue, cheeks, lips and ears. The favorite sites of the benign cancer are the forehead, nose, cheeks, eyelids and chin. The latter type is curable in 95 per cent of the cases when treated early and adequately.

Persons who work with paraffin and tar are often subject to skin cancer. A few cases can usually be found in factories in which workers handle crude coal tar.



The dark areas are cancerous. The epidermal cells have wildly invaded the underlying tissues. Both pictures are photomicrographs.

The treatment of skin cancer should begin early, and it should be carried out to its full measure. Half-hearted puttering with caustics will do more harm than good. Surgical removal, thorough destruction by the electric needle or the application of the x-rays or radium may be employed according to the type of cancer, its location and the experience of the attending physician. Observation at regular intervals should follow treatment.

Over 3,000 persons die annually of skin cancer, in spite of the fact that the majority of these deaths are preventable; but there has been a decided reduction in the mortality from cancer of the mouth cavity and of the skin. This decline should encourage us to continue to educate people in prevention, recognition and proper treatment of these conditions.

Skin cancer and the relatively few deaths resulting from it are concentrated in the older age groups. Although it is ordinarily seen in old age, it frequently occurs in earlier years. Among white persons, the average death rate for men is about twice that for women. The native American Indian and the Negro are relatively immune to skin cancer.

Dublin and Lotka state, "The downward trend in the mortality from cancer of the skin is one of the bright spots in the cancer picture." This is probably due first to early diagnosis and immediate treatment of all persistently rough spots, swellings, lumps or ulcers in the mouth or on the skin; second, to better dental care, and third, to widespread educational measures.

When we consider that benign [harmless] and malignant [virulent] skin cancers are common in late adult life, that they are easily recognized as such by the physician, that they are so accessible for examination and respond so well to treatment, and the results of surgery, the x-rays and radium are so satisfactory, it is surprising how much ignorance exists in regard to their early correct diagnosis and proper treatment.

Skinner effectively summed up the management of the problem when he said that one candle power of intelligence applied in early diagnosis or in the elimination of the known precancerous situation will be far better than a million volts of the x-rays for late cancer displays.

Alfredo Valente

The TRUTH about CATARACTS

MANY PERSONS, even among the well educated and well informed, do not know what the term cataract means as applied to the eyes. Many think it is some new growth which is gradually covering the sight. Some even think it is similar to cancer. So cataract is often alarming to many persons. When a patient learns that he has a beginning cataract, the eye physician will explain to him that a cataract is simply a clouding of the normal crystalline lens. This part is used to focus light and images on the back of the eye. When a patient has had a cataract removed, which also involves the removal of the lens of the eye, a glass must usually be worn in order to restore good vision. The glass will function in place of the lens. Thus explained, patients will have less fear of this dreaded diagnosis.

During the past few years physicians and chemists have been doing much experimental work with the various vitamins. In view of the fact that in certain animals, especially white rats, a complete lack of some of the vitamins in the feeding of the animals results in the development of cataracts, it has been hoped that treatment with some of the vitamins might prevent the development of cataracts in human beings. So far, little has been accomplished to further this highly desirable result.

Between forty and forty-five years ago, over a spell of four or five years, many cataract patients were treated with electricity, but this was abandoned since good results were not obtained. In some patients the dilatation of the pupil by the use of drugs improves the vision for several days. This method was employed as a trick by some of the unscrupulous persons advocating the cure of cataract by electricity, and many patients were accordingly deluded into continuing with the electrical treatment over long periods. Eventually, however, these patients came to believe that the operation as suggested by their physician was the only cure for their affliction.

The surgical removal of cloudy lenses in properly selected cases gives excellent visual results in over 90 per cent of patients thus treated. By the proper use of local anesthetics this operation is unattended by any pain or discomfort, and the patient need be kept in bed only a few days.

The drugs most commonly used by physicians to be dropped into the eyes of patients having cataracts are those which temporarily improve the circulation of both the blood and the lymph. One of these drugs has an especially pronounced action in dilating the lymph vessels. This drug used in weak solutions will cause a swelling of the inner membrane of the eyeball and the lids and cause dilatation of the blood vessels. It was thought that this effect on the lymph and blood vessels would improve the circulation in the front part of the eyeball and in that way, perhaps, influence the condition of the lens itself, particularly that of the front part of the lens. Drugs have been injected under the conjunctiva, which is the thin membrane covering the white of the eye, and vaccines injected under the skin.

It has never been possible to promise cure of the lens affected in this way. In fact, it has seemed better as a rule to explain that the treatment was used so that, if possible, any increase of the cloudiness might be retarded. It was soon found that this drug lost its effect on the lymph circulation, if it was used continually, so during all these years it has been used intermittently. Other

Eyes with cataracts are sick eyes and should be watched and cared for accordingly. Surgical removal is sometimes the correct procedure for treating cataract; other times improvement in one's general health seems best. But at no time should the patient allow any persons but trained eye physicians to care for him.

By **ALLEN GREENWOOD**

drugs were tried but were soon discarded in favor of the one that has now been in use for so many years.

This eye-drop treatment was not used alone but always combined with fairly frequent changes of glasses, as it became necessary, and careful instructions as to the use of the eyes and the maintenance of the general bodily resistance by proper diet and careful living. Long before the days of our special knowledge of vitamins, the diet was largely enriched with the foods which are now recognized as sources of the necessary vitamins. Many patients in whom incipient cataracts were found have drifted into the hands of quacks who claim to cure cataracts; but they have later returned with the cataracts much more advanced and, of course, without being cured. Besides the use of electricity, various other methods have been tried, such as palming and muscle exercises; but there is still no actual cure of the beginning cataracts.

Certain objectives are attained by the careful treatment of patients with beginning cataracts, who know that they have clouded vision or have been told that they have cataracts. The first is the patients' awareness that something is being done for eyes that are not absolutely normal. Second, these patients are thus kept under observation and seen every four to six months and the eyes carefully examined each time to make sure no additional ocular disturbances have occurred, particularly glaucoma. Glaucoma is sometimes spoken of as hardening of the eyeball. This results from an interference with the normal flow of fluids from the interior of the eye into the circulation. Therefore this causes an increased pressure within the eye which, if not relieved, ultimately results in incurable blindness. Patients often go to eye physicians for the removal of cataracts, after having been advised by some one many years before, when they had beginning cataracts, to wait until the eyes were blind, when an operation could be performed. In these cases, glaucoma has often been found as the actual cause of their near blindness, and in a condition so advanced that no operation could restore the lost vision. This condition would have been detected if they had been examined regularly. In the third place, clouding of the lens is bound more or less to change the refraction of the eye; hence the necessity of fairly frequent examination for the change of glasses and thus the avoidance of undue eyestrain.

Committees from several of the national societies interested in treatment of ocular diseases have investigated the subject of the medical treatment of cataracts and have reported no cures from any form of medical treatment. Nevertheless, it has always seemed to me that watchful treatment has lessened the rapidity with which the cataract has progressed. Incipient cataracts are sometimes found which show no marked increase many years later. All such patients have been in general good health. These experiences, which show that cataracts often become stationary, make it difficult to evaluate any form of medical treatment; the fact that sometimes patients have periods when they see better than they did a few months before also makes the evaluation difficult. On the other hand, many other patients who had been growing progressively worse were treated and the progress of the cataract immediately halted. They were then able to see more clearly both on the test chart and in reading, and there has been a general improvement in the eyes themselves. This is especially true in the case of those patients who may have a noticeable clouding of the vitreous humor [semifluid portion in interior of eyeball] behind the incipient cataract. With the general improvement in the ocular condition from treatment, such clouding has become lessened without any visible change in the cataracts themselves. Some apparent improvement in vision has followed the use of radium; but this form of treatment has been wholly abandoned in view of the danger of increasing the cataract. The indiscriminate use of radium and x-rays about the eyes is well recognized as a possible cause of cataract in otherwise normal lenses.

While it is true that cloudiness of the lenses may change their shapes and appearances from time to time, it must be obvious that at present there is absolutely no definite cure for beginning cataracts. It must be equally obvious that any person who claims to cure early cataracts by any type of modern treatment, except removal in suitable cases, would have hard work to prove his claims, particularly if he had to submit proof of absolute cures to a board of competent ophthalmic surgeons. While no actual cures can be accomplished at present, all possible attempts should be made to better the condition of the eyes insofar as this can be accomplished. Eyes with cataracts are sick eyes and should be watched and taken care of accordingly. We can be sure that with improving the general health and the health of the eyes lies the road to our best results, until research some day leads us to a better way and a possible cure.

TREATMENT OF
Bone and Joint Tuberculosis

When the tuberculosis germs settle in these places, deformities often result that need special assistance; besides, the regimen for curing the disease itself must be maintained.

By EDWARD L. COMPERE

POVERTY, ignorance and mass inertia will undoubtedly delay the realization of the Utopian achievement of complete elimination of bone and joint tuberculosis. The problem of what to do for the patient who develops this type of active tuberculosis must still be faced.

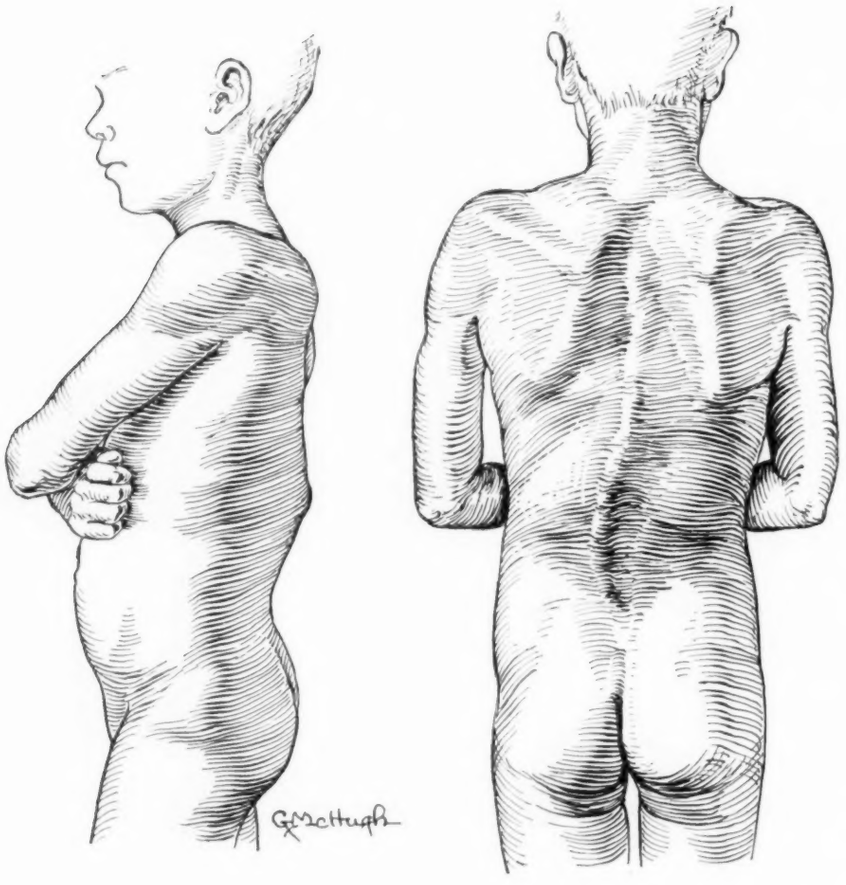
Orthopedic surgeons throughout the world (who specialize in correcting bone deformities) agree that the treatment of the disease of bone and joint tuberculosis must include maximum rest for the diseased part. Motion in the tuberculous joint keeps the disease stirred up.

The present conception of the treatment of tuberculosis of bones and joints, to quote Allison, depends also on "the realization that the local disease process is of secondary importance and that the treatment of the individual is a matter of prime consideration."

Orthopedic surgeons of the United States, while for the most part convinced of the value of surgery as an adjunct in the treatment of bone and joint disease, are fully aware that surgery alone cannot cure tuberculosis. Among others, Rollier in Switzerland and LaGrasso in the United States, have demonstrated the healing properties of rest, sunshine, fresh air and good food. It has been the experience, however, of many American orthopedic surgeons that a greater proportion of patients recover from this disease, and the total period of disability is shortened if, in addition to the previously mentioned routine care, they are given the benefit of wisely planned and skilfully executed surgical treatment.

Surgical intervention (severing and stiffening of diseased joints) is merely a part of the whole treatment. It has been shown that absolute immobilization (rendering a joint completely immovable) is effective and can be accomplished by surgery. It is frequently necessary to take a portion of the affected area, bone or other tissue and examine it under a microscope before a diagnosis can be made.

The surgical treatment of tuberculosis of the bones and joints was a natural step following the development of asepsis, or absolute surgical cleanliness. The results of the early attempts to bring about permanent cure of bone and joint tuberculosis by completely or partially cutting away diseased portions were discouraging. These early operators falsely assumed that they could eradicate the disease by such surgery and were not primarily interested in an improved method of splinting or keeping motionless the joint involved. Surgery based on this impractical assumption was not successful and gave way to treatment by immobilization with plaster jackets and braces. However, later observations of many cases over long periods of time brought out two important facts: First, tuberculous joints without surgical splinting will not heal; the infection may actually persist, though rela-



This boy is suffering from advanced tuberculosis of the spine. In a natural attempt to compensate for the uselessness of the diseased joint, the adjacent parts form the visible hump and curvature.

tively dormant, for as long as fifty years. Second, when nature does cure, the joint is usually permanently and firmly stiffened, thus indicating that this is the natural end result of healing in this disease.

Modern treatment of bone and joint tuberculosis includes then, rest for the body as a whole and rest particularly for the parts diseased. No mechanical apparatus can provide immobilization which can even be compared to the splinting of tuberculous joints by bone grafts; this bone tissue is obtained either from the nearby bone or from one of the shin bones.

It is possible to splint internally by cutting cartilage of the diseased ankle, knee, hip, wrist, elbow or shoulder and to stiffen the spine similarly throughout the area of disease. Orthopedic surgeons do not falsely assume that it is possible to remove all the diseased tissue; but they know that stiffening the joint affords a more effective method of splinting and supporting than either braces or plaster can duplicate. Furthermore, this surgical splinting is permanent, so that when the patients are permitted to resume their normal activity, the weight bearing and the multiple bumps of everyday life are less likely to cause a reawakening of the disease, which during the period of sanatorium care may have become dormant.

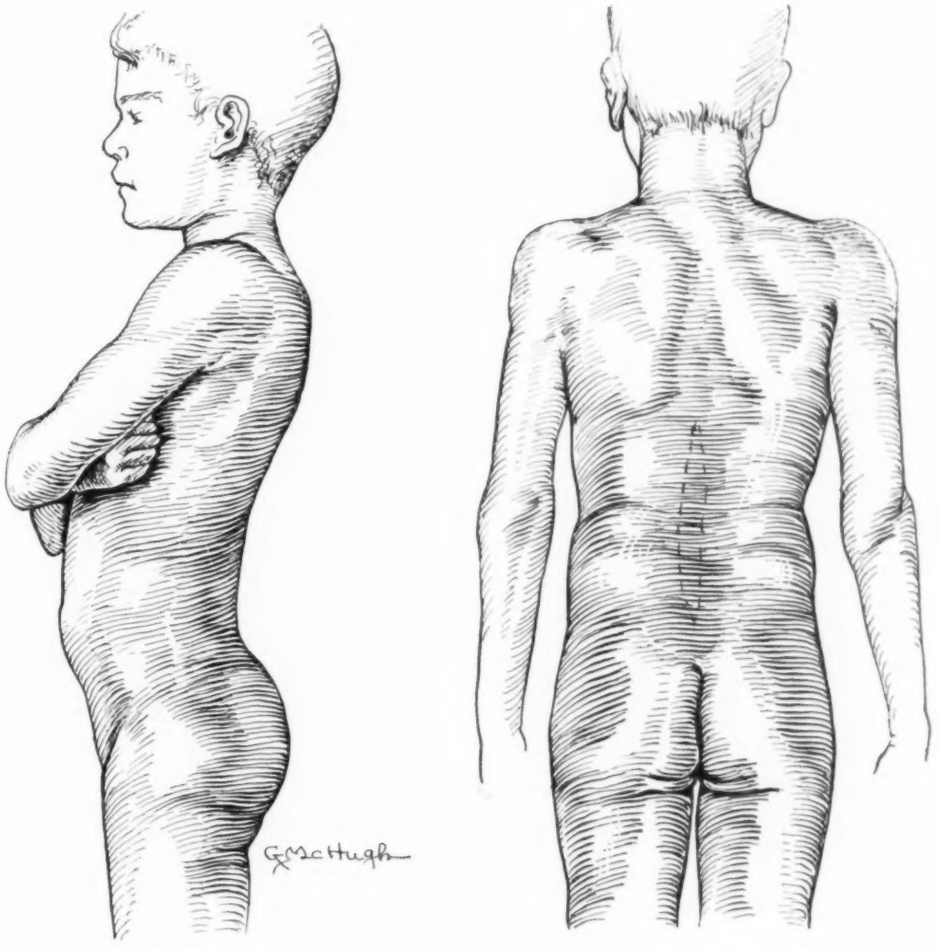
There is some evidence that tuberculosis in Europe and in the British Isles responds better to simple brace, cast or complete body rest than does the similar case of this disease in the United States. This is possibly because so much of it is of bovine (cattle transmitted) origin. In this country the infection is nearly always obtained from contact with a tuberculous person, since bovine tuberculosis is practically eradicated here.

Sanatoriums or convalescent homes afford the best type of place for children recovering from tuberculosis of the spine. Young children may be kept splinted on special frames or plaster beds for a period from months to a year before operation and in most instances from nine months to a year after operation. After this period of complete rest, a light back brace or body cast is worn for six months to a year, during which time the child is kept under observation. Frequent tests and examinations are conducted.

It is not always possible to provide so ideal a convalescent program for the adult. Fortunately, however, the number of patients reaching adult life with active bone and joint

tuberculosis is small. Most adult patients respond favorably to this operation for internal splinting. Two to three months after an operation to graft a piece of the tibia (shin bone) to the spine, the adult patient may walk if he wears a back brace. Before the operative program came into wide use, many of these patients were kept strapped to frames, boards or in casts for from three to ten years.

ties, weight bearing and injury—either as predisposing factors in localizing the infection or in keeping the disease active—cannot be ignored, and in weight-bearing joints stiffening may be necessary for permanent cure. When tuberculosis enters the small joints of the foot, the outlook is poor. The foot is subjected to much weight-bearing injury, and the disease may spread rapidly to other joints in the



The same patient after surgical intervention. The disease has been cured by suitable treatment, and surgery has corrected the deformity by a bone graft and splint over the affected area, which is as indicated along the spine.

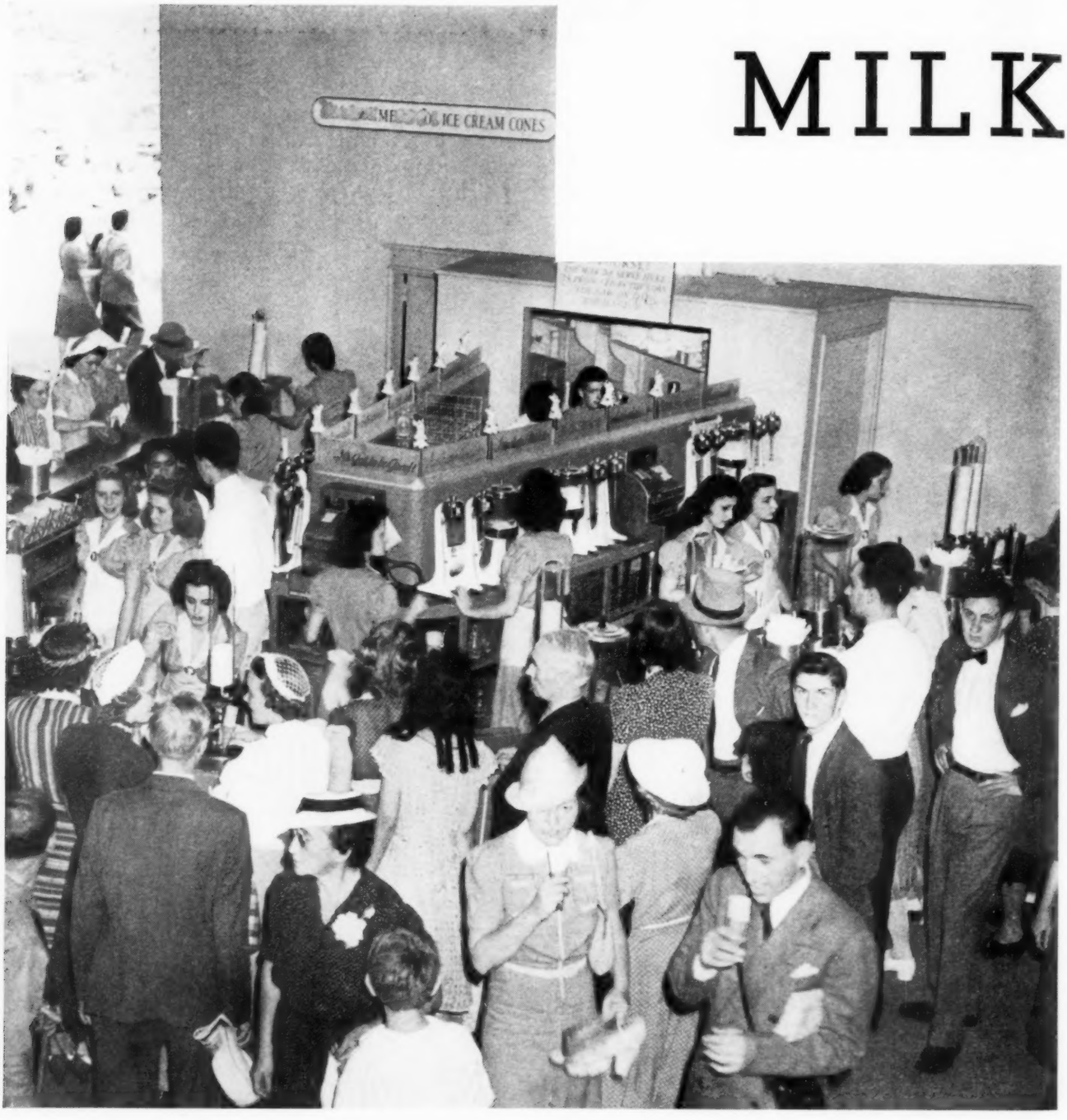
Many orthopedic surgeons fuse or splint other diseased joints by transplanting to the hip, knee or ankle a strong, thick graft of bone taken from the shin bone. These heavy living grafts become firmly attached to the bone on each side of the joint and permanently prevent motion.

For some strange reason, possibly because of the nature of the joints and the fact that no weight is borne on them, there is a greater tendency for tuberculosis of the joints of the hand, of the wrist and the elbow to heal without operation than for those of the spine, hip, knee or ankle. Since, however, more than 95 per cent of all cases of bone and joint tuberculosis involve the spine or the lower extremi-

foot, with the development of sores from which the pus will drain. Amputation may become necessary in some cases.

There is danger in deferring operation indefinitely. Patients who are seen at an early stage of the disease before their general health has been undermined may be found to lose ground steadily, even though given the best of additional treatment. They may develop abscesses and openings discharging tuberculous pus. Permanent damage to the liver or kidneys may follow. In these cases, the local lesion may heal, but because of the gradual failure of the secondarily damaged kidneys or other vital organs, death may ensue within a few months.

MILK



Milk has grown so popular as a beverage that fountains have opened up to serve it in its many delicious forms.

A NEW style in "drinking" is sweeping the country with all the furor of a new fashion in woman's dress. It is now smart to drink milk and beverages made from milk at a milk bar. Milk bars are springing up like mushrooms in towns from New York to San Francisco. Milk bars with ultramodern fixtures were prominently and conveniently located all along the main avenues and by-paths of New York World's Fair.

The milk bar must not be confused with the typical American soda fountain. It is just what its name implies, a bar, often with the familiar brass rail, which serves milk and milk drinks. Its history is brief. According to the Milk Industry Foundation, the first English milk bar was introduced in London on Aug. 1, 1935. Legend has it that the Australian, H. D. McIntosh, noted the difficulty of getting a glass of milk in a London restaurant or tea shop and bet a friend that one could not be had within twenty minutes in a section well supplied with popular-priced eating houses. He won his wager.

He set up the first milk bar on Fleet Street in the heart of London's newspaper district,

BARS

By MARION DARTNELL

where there was a 24 hour demand for a place to obtain liquid and other nourishment. Despite the Englishman's thirst for more fiery viands and his innate conservatism toward innovations, the milk bar became popular almost immediately. Hot milk soups apparently solved the problem of nine months of cold, damp weather in England. The hot soups are prepared by mixing up a standard canned strained vegetable soup with hot milk right before the customer. It is served in a cup and drunk like coffee or tea.

The success of the Fleet Street milk bar soon led to the establishment of many more in London and elsewhere. By the summer of 1937, there were more than 940 milk bars operating in England; there are now well over 1,000, many of them situated right between a tea house and a "pub."

The Boulevardiers of Paris first saw a milk bar on a main street last April, and, shocking though the sign "Drink More Milk" may have seemed to the veteran cafe frequenters, it started off with a bang. When the bar in sweltering Singapore opened, it was described as "a bold commercial experiment," but the heat was in the bar's favor.

In America, the milk bar appeared in several places almost simultaneously. Several leading department stores have installed milk bars. They have appeared in Boston, New York, Chicago and San Francisco. Even in Milwaukee, the city made famous by beer, milk bars seem to be gaining headway. In Green Bay, Wis., a boy's high school club started a milk bar, and now the boys have to elbow their way through members of the Kiwanis Club to get to it. The Woman's Christian Temperance Union has sponsored a milk bar in El Paso, Texas, and the chances are strong that the W. C. T. U. will make a greater use of them in its cause.

Society parties are featuring milk and milk drinks in lieu of the old standbys. Last winter a New York hotel installed a milk bar for a debutante's coming out party. So popular was this innovation that the hotel later installed a permanent milk bar.

Perhaps the most noteworthy result of establishing the milk bar is the increasing prestige now accorded this cool white fluid. The milk or milk beverage is served in a tall frosted glass. Whole milk, skimmed milk, buttermilk and milk beverages of various kinds and flavors may be obtained. The beverages are prepared with milk and various kinds of fruit sirup, chocolate sirup, maple sirup or spiced sirup. The beverages are compounded before the customer's eye. All milk is pasteurized.

For the most part, the milk bars appearing in this country are being sponsored by dairy companies and are subject to the general supervision of the local health department.

It is rather surprising to learn in these days of milk bars that the ancients recognized that the delectability of milk was increased by cooling. History informs us that, while the methods employed were crude, the Chinese froze milk and cream drinks as early as the fifth century B. C.

"Orgeat" is an old fashioned milk drink that our Southern cooks adapted from the sirup *d'orgeat* which is still compounded in French homes. It was made by steeping almonds and stick cinnamon in milk until the milk was properly spiced. The milk was then cooled and flavored with a small amount of rose water. This beverage might be considered the forerunner of spiced milk beverages.

Whey, drained from milk curd, was another old-time hot weather drink that sustained many settlers during the hot summer days. Whey is recognized as a nutritious beverage, since it contains some of the protein, mineral and vitamin values of whole milk. When it is livened up with sweetened fruit juice, it is a smooth beverage that has no peer.

Skimmed milk and beverages made from skimmed milk are a boon to overweight persons who want the drink but not the calories. Its caloric value is not so high as whole milk, because skimmed milk lacks the butter fat; neither is it as good a source of vitamin A. It has all the minerals, protein and water-soluble vitamins (vitamins B_1 and G) that are found in whole milk.

The milk bar seems to be the answer to the prayers of all public health workers and nutritionists who have been championing the cause of "drink-more-milk" for years. The milk bar also affords the public school nurse a new means of interesting school children in drinking milk instead of the less nourishing carbonated beverages that are always displayed so conspicuously in the candy stores placed so conveniently near public schools.

Going to the Hospital?

"I'M AFRAID we'll have to operate, Mrs. Carey." Your doctor leans back in his chair, slides forward a little, stuffs his hands in his pockets and says briskly, "I want you to go into the hospital next week, say Wednesday. Make your arrangements with Miss Bursley, please."

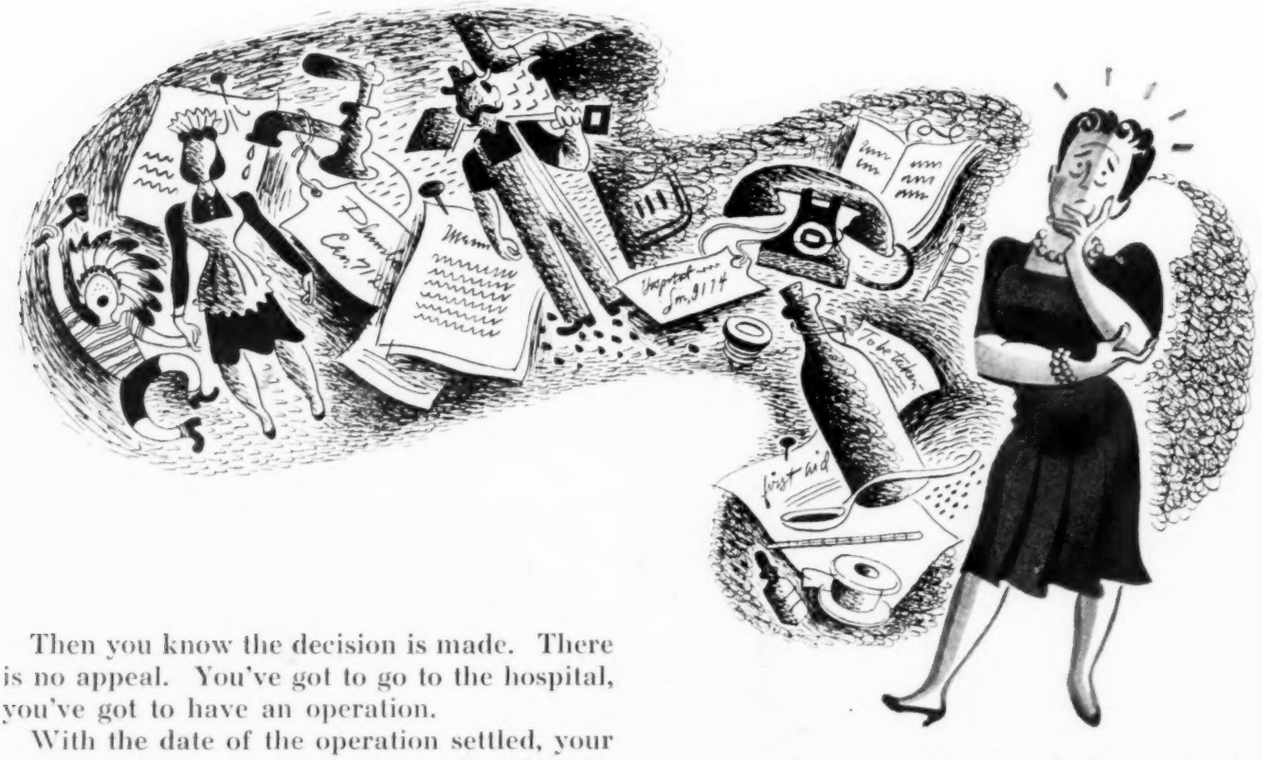
Then you know the decision is made. There is no appeal. You've got to go to the hospital, you've got to have an operation.

With the date of the operation settled, your room engaged, you can begin to give thought to the practical domestic problem involved in leaving your family for two or three weeks.

Every woman knows that, unless the operation is an emergency one and she is whisked to the hospital in a clanging ambulance, suffering tortures, there are numerous things that ought to be done before she goes. But what are they? Thoughts mill around dizzily during sleepless nights. Days pass, and she enters the hospital. Then, lying quietly in her little high white bed the night before her operation, she thinks of all the things she should have done, all the things she wishes she'd brought with her and all the things she wishes she'd said to her loved ones.

I've been in the hospital six times in twenty years, three of these times for babies. It is possible to go to the hospital with almost every contingency planned for. Let me tell you how.

You must make decisions, one after the other, about everything for which you are responsible. You must decide whether to ask a relative to supervise the children and run the house, or whether your regular maid can do it alone, or whether you will hire a housekeeper nurse if you have no maid. You have to



decide who is to take the children to school and their dancing lessons. You have to plan who'll take your club paper and carry on in P.T.A. work for you. You must plan for life to go on while you withdraw from it. Yes, it's quite an order, but you can do it!

Unless you have had your maid over a year and she is extraordinarily conversant with the way you run your house and bring up your children, make a typewritten schedule of each child's daily activities and thumb-tack it in his room. In the baby's room put a list of feeding hours, a copy of the formula, nap times, times for outdoors, how the windows are arranged at night and all your own pet time-savers.

By REGINA J. WOODY

In the 5 year old's room, note the time for getting up, the time he leaves for kindergarten, lunch time, the kind of clothes he wears out to play, whether he may cross streets, what time he must come in, what time he must be in bed, where he may visit.

Grown up daughters and sons need schedules, too, of a sort, though Father should be the boss here. Write down the clothes each may wear, the names of places where they may spend the day, the parties they may attend on Friday or Saturday evenings, the time they must be in on school nights, the time to spend on homework duties. You'll have something personal and important to put in each room, even to a note about John's not using the car without Father's permission, in addition to his not wearing his Sunday suit to play baseball in!

Write sample menus, and list the telephone number of your husband's business office, your doctor, the children's doctor, the hospital, police headquarters, near neighbors who are dear friends and the stores you trade with. Thumb-tack these in the kitchen.

Be sure the hospital address and phone number are tied to each of your telephones with something like a baggage tag. That way, no matter who answers, the place "where Mother is" is at hand.

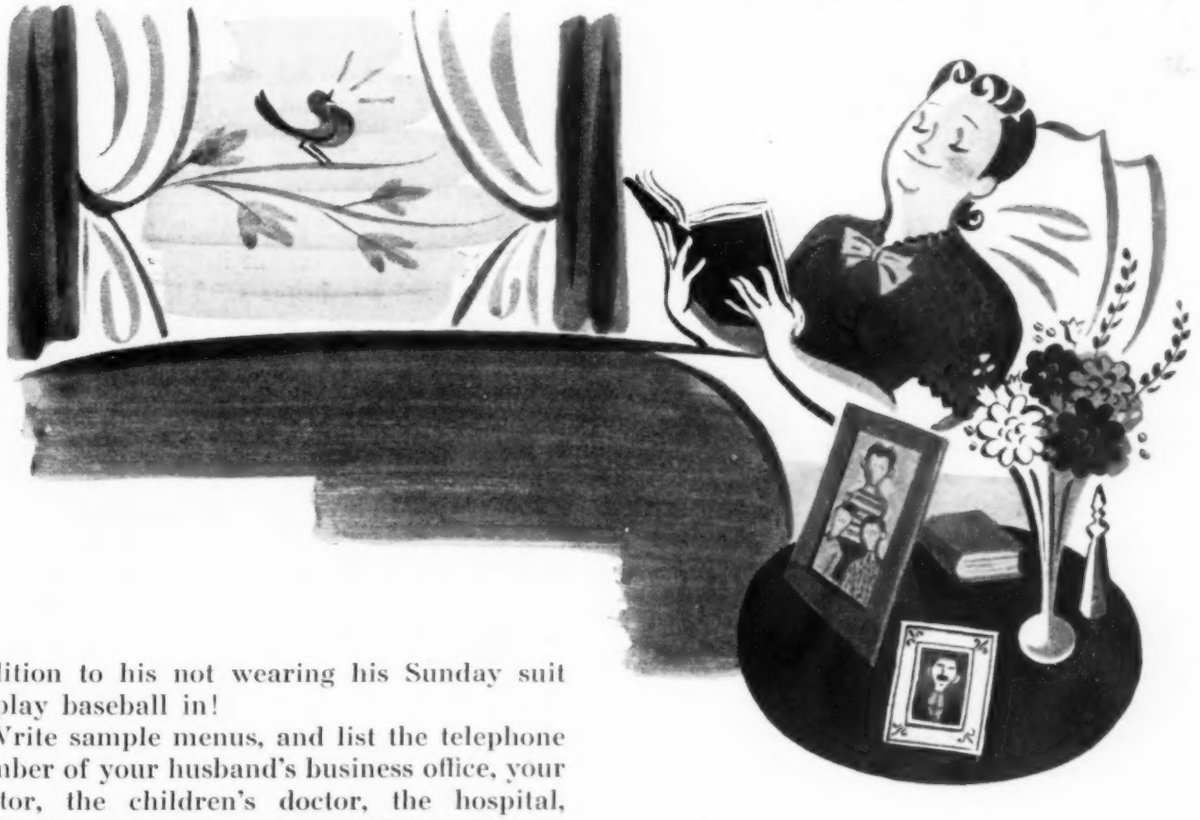
Leave a note in the medicine cabinet to explain simple first aid for small burns or other slight injuries. Leave conspicuously a fever thermometer.

Leave iodine, boric ointment and bandages also handy in the top of the kitchen cabinet.

If you really run the furnace because your husband is away from home too much to look after it entirely, and if your maid is totally untrained in its care and feeding, arrange with a handy man to come night and morning. Show him how to do it. Explain the use of the damper to your maid. If you heat by oil or gas, merely leave a tag with the telephone number of the repair service tied to the damper, in case of trouble.

Leave plenty of electric fuses, and see that your maid either knows how to throw the switch and replace one or that she knows how to call the electric company and ask them to do so.

Leave your plumber's name and number tied to a bathroom fixture. Show your maid where the water shut-off is in the cellar, in case of a bad leak. Tag the gas stove with the number



It can be a pleasure to have an operation! Attend to those myriads of responsibilities before you go to the hospital, and you will enjoy yourself as though you never had a care in the world.

of the gas company, in case of trouble, and tell her to call them if she smells gas when all burners are turned off.

If you've always defrosted your own refrigerator, show her how. Leave the number of the refrigerator repair service tied on it, and ask her to defrost it before it becomes too heavily coated, say once a week, at least.

You'll have to leave a lot of things to the judgment of the person who takes your place; but she can have your confidence in her ability greatly built up, if she knows just exactly how to get help quickly, when and if she needs it.

Sort the children's clothes, and mend them. See that shoes and rubbers, outer garments and caps are in good condition. If a change of seasons will take place in the two or three weeks you are away, lay out summer underwear, thin dresses, short socks. If winter is approaching, buy scarves, mittens, warm caps, put winter coats and overshoes at hand, and see that everything is large enough to be worn that you take out of your cedar closet.

Look over your calendar, and see that every future date you have made is either cancelled or explained. Write, after going over your address book, to the dear ones you want to hear from in the hospital, and give them your address. Then turn your attention to yourself.

You may want a good permanent, a facial and a manicure a few days before you go in the hospital. As for night-gowns, you'll want at least eight, easily laundered and pretty.

When you pack your suitcase, plan for convalescence, as well as illness. Remember you will probably be in the hospital ten days to three weeks. During that time you will rest, read, sew or knit. You may sit up a good deal, but you won't walk much.

Be sure to take a good wrist watch. It's fun to know the time. Take warm bedsocks, a soft warm bathrobe, a pretty colored thin one, loose warm slippers, three pairs of heavy silk stockings and round garters. Sitting up in a chair is often chilly business, and a warm bathrobe and stockings make a blanket around your legs unnecessary.

Some women adore bed jackets. If you don't, take along two or three pretty sweaters. They are warm, smart and flattering. Take your manicure set, a brush, comb and mirror, plenty of handkerchiefs, your favorite cologne, cold cream, a box of fragrant dusting powder, toothbrush, toothpaste, a mouth wash and your pet toilet soap. Wash cloths, towels and paper handkerchiefs are provided.

If you go to the hospital in winter, a couple of flannel nightgowns are a luxury. Hospital rooms can get very cold at night, and hospital blankets are clean but not always warm.

When you must go away and be away over a child's birthday, get a neighbor or relative to give a surprise party for the child. Hide a couple of presents with other neighbors to be given during the day, and take a stamped card along to the hospital to send, yourself. If you have a private room and are well enough, a call can be put through, and you can speak your own birthday wishes.

Be sure you have pictures of your children, your house and your husband. Even if you're not sentimental, it's pleasant to have nurses exclaim over the beauty of your children, the adorableness of your house, the interesting face of your better half.

The hospital will have stationery, but take stamps and large sheets of writing paper if you write a lot. A dozen stamped post cards are invaluable for forgotten orders to stores or notes of explanation. Take your own fountain pen and ink, half a dozen pencils and a small sharpener along with you. If you don't use them, no harm is done. If you do decide to catch up on your letter writing, it's a joy to be able to do so.

Once you enter the hospital till you leave, depend only on cold cream and powder as cosmetics. Any other makeup will only fool your doctor into thinking you look better than you really feel. If you feel sick, say so and look so. If you don't, say so, too. It'll be a pleasure to him to know you feel like a million.

Put all your small toilet articles, comb, manicure set, cold cream in your bedside table drawer when you unpack. These you yourself can reach without ringing for service. Put everything else away, either in or on your bureau.

Most hospitals will supply you with a daily paper night and morning. Usually there is also a lending library, but you'd best not depend on it, for you can seldom get the latest books from it. Take three novels and one biography, the very latest published, three magazines you particularly like and one book dealing with art, opera or history which you've always meant to read. These will keep you busy, and you can get more by mailing a post card to your favorite book or department store. Friends and husbands are notoriously poor providers of the right reading matter.

See each of your children's teachers before leaving home. You will be surprised how gladly they will "take over" the children's care, see that they do their homework, watch runny noses or suspicious *(Continued on page 254)*

Watch Your Dog!

By W. E. AUGHINBAUGH

A dog can bite a man and not make the newspapers; but that bite can make the man a victim of an ever present hazard—RABIES!

Seibelman Syndicate

THE GREEKS had a word for it. Hundreds of years before the birth of Christ it plagued their country in epidemic form and had the inhabitants terrorized, for every one who contracted the malady died after the most painful suffering. They called it "hydrophobia" from two Greek words: "hydro" meaning water and "phobia" meaning fear or madness. This appropriate name was due to the fact that this strange sickness, which primitive man knew resulted from the bite of wolves and dogs, threw its victims into distressing convulsions when they were offered any liquid, particularly water, to drink. In other words rabies or hydrophobia has existed for thousands of years. This fact is definitely established, for on the walls of subterranean dwellings of the cavemen of France, as well as on ancient clay bricks from Babylon, human beings and dogs are shown in convulsions from such bites. It had its origin undoubtedly among animals living along the shores of the Mediterranean and the Red Sea. It was common in Egypt in the days of the Rameses [1500—1000 B. C.]. But the great majority of cases was found in Greece and Rome, for much land in those countries was devoted to grazing sheep and cattle. The presence of these domestic creatures induced wolves to stalk and attack them, and when shepherds and dogs attempted to drive them off, they in turn were bitten by the wild beasts. The rabies that developed was always fatal.

Rabies, or hydrophobia, is an acute, infectious disease common among wolves, dogs and men. In the first stages of the sickness, dogs bite human beings, horses, cows, sheep, swine and other live stock, and they in turn contract rabies. They become dangerous, going absolutely mad, and bite anything that comes in their path, thereby spreading the malady. Bitten animals, unless immediately killed, ultimately die in great agony. Strange to relate, barnyard fowl and cold blooded animals seem to be the only victims which recover from the bite of a rabid animal.

The tragic sickness, which is most awesome, is characterized by great excitability, mental

disturbances and convulsions which involve the central nervous system. The causative organism has not yet been identified. The virus [germ] is found in the saliva of the rabid animal and may be detected four or five days before other symptoms appear. It is definitely established that the germs enter the body only through an abrasion or puncture in the skin, usually a dog bite. Children are the most frequent sufferers, because they cannot defend themselves, are apt to be too friendly with animals, especially dogs, and are unable to escape a diseased animal. It is especially prevalent in the Mediterranean countries, in northern European regions, throughout Latin America and in the United States, particularly in the states of the South, Middle South and the Southwest. Due to the fact that Canada, Great Britain, Australia and New Zealand quarantine all dogs and compel them to be kept on leashes, rabies in these lands has been stamped out. Some cities, alive to the danger of hydrophobia, do not permit dogs to live within their confines. In Iceland and Ireland, dogs are prohibited from living in any towns. Farmers are allowed one dog for a specified number of sheep or cattle.

When a person is bitten by a dog, no matter how small the wound, a physician should be immediately consulted, for the period of incubation [between the time of the bite and the appearance of symptoms] may run from seven weeks to six months. Unfortunately during these varying periods of incubation, no signs of approaching attacks are apparent, and the wound heals. It is this deceptive situation which makes it all the more important that a bite be treated promptly by a doctor. It is always too late to use the antirabic vaccine after the symptoms of the disease have started.

If hydrophobia develops, the area surrounding the wound becomes numb; the patient feels uneasy and irritable; there is a slight temperature; the voice is husky; excitement and restlessness follow; the sick one becomes abnormally sensitive. Noises and odors cause convulsions; the muscles of the diaphragm, larynx and pharynx are sore and congested. Always thirsty, the prostrated one cannot drink without agonizing convulsions. The temperature increases. Vomiting follows, then intense thirst, pallor, and the eyes stare as the pupils become unequal. Hallucinations [visions] come, and the victim may accidentally injure the attendants. A ropy saliva drools from the mouth, and a deep coma precedes the real relief of death. Few patients live more than five or six days after symptoms appear.

Authentic data collected by the U. S. Public Health Service reveals something of the prevalence, the human suffering, the financial loss in stock killed and the municipal expense incurred as a result of rabies. In doing so, bear in mind that I speak as a physician, interested in human beings and their comfort, and do not have for my purpose the thought of creating a wave of hysteria against dogs; I hope to show that if the people of this country will cooperate with the proper authorities, rabies can positively be eliminated, as it has been in other countries.

When our overseas troops returned from Europe, many of them brought over stray dogs which had attached themselves to various organizations, primarily because they were sure to be fed by the soldiers. These dogs came from Germany and France. Most troop ships docked in New Jersey ports. Some of the veterans forgot their pets and hurried home. The dogs thus abandoned, coming from a land where rabies is common, became strays and wandered from city to city, leading precarious lives and existing on refuse. In many of them rabies developed, having been bitten by rabid animals abroad. As a consequence, rabies spread in New Jersey to an alarming extent; a 1,000 per cent increase was reported by the health officers of the state for the first six weeks of last year. One hundred and forty-six persons, mostly children, were bitten by mad dogs and were given the antirabic vaccine. Many others died who did not receive medical attention. As a result of this epidemic, police were instructed to kill all stray dogs. In the outskirts of Newark, eighteen mad dogs were shot. In addition, a three months' quarantine on all dogs in New Jersey was ordered. In all, 222 cases of rabies in dogs were discovered in five counties, and despite the best medical care, three children aged 6, 11 and 13 years died in terrible agony from canine hydrophobia.

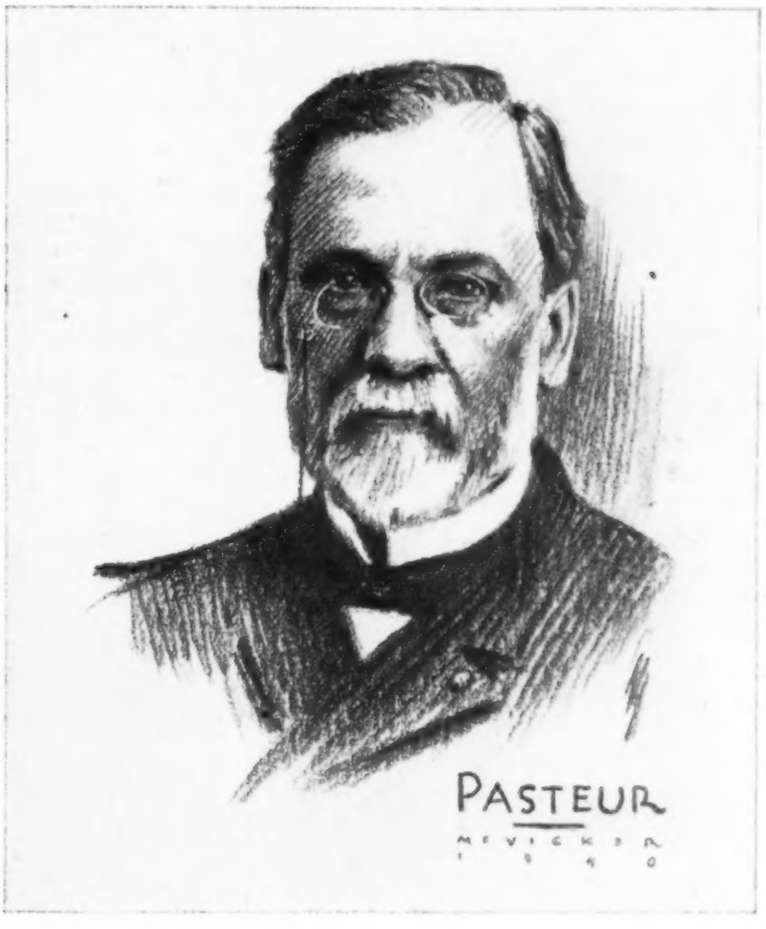
Immediately following the New Jersey outbreak, Long Island suffered a similar experience. At Woodside, Long Island, one rabid animal attacked and bit two children and a policeman. At Point Lookout, another beast bit six persons. Autopsies showed that both had hydrophobia. Nine other cases from various sections of Nassau County in New York were reported.

In Florida, there were many cases, of whom two were neighbors attempting to separate their fighting canines and were bitten, afterward dying. In Georgia, 509 cases of rabies in dogs were reported, and 2,569 human beings

who were bitten received the antirabic vaccine over a period of four years. In one instance, a dog ran 147 miles through the state, entering eight towns and biting ninety-three other dogs. How many other human beings and animals it attacked and bit will never be known.

Another rabid animal journeyed 20 miles through Alabama and bit seventeen human beings and more than 200 head of stock.

In California more than 3,000 cases of mad dog bites were registered in 1938. In the little town of Palo Verde, one beast bit thirty-seven



It was the great French scientist Pasteur who perfected the vaccine now used in treating rabies. This disease annually takes a large toll of lives here in this country and costs municipalities a fortune to treat clinically.

school children who grouped around it in sympathy, thinking it had a fit. The janitor and one teacher died of hydrophobia; the other victims were saved.

Illinois during 1938 had 5,151 victims of dog bites who were treated with antirabic serum. Chicago has had a continued epidemic of rabies for several years, the increase of those bitten in 1939 being 50 per cent higher than in 1938. Of Michigan's 4,062 victims who were treated with vaccine, most of those bitten lived in Detroit.

In Vineland, N. J., a rabid puppy bit twenty persons, ten of whom were school children. Both the janitor and his assistant who came to the aid of the pupils were bitten and died of hydrophobia. In Pelham, N. Y., a mad dog bit six children, the oldest of whom was only 8.

The Southern states and the Far Western states have suffered severely from dog bites. For eight years Alabama was second in the list of states with 9,282 positively diagnosed bites by rabid dogs; in that time 34,864 victims were treated. Georgia followed with 12,767 bites; Louisiana had 11,905, and Mississippi 8,045. Texas has had the greatest average annual increase in rabies, the deaths of cattle and human beings from this source being double that of any other state. In one study of 9,560 cases of dog bites in Texas, laboratory tests on the brains of suspected animals showed conclusively that 2,910 dogs had hydrophobia. Every state in the union has had similar experiences. The U. S. Public Health Service has records of 2,167 cases of bites of mad dogs, the data being collected from various state boards of health.

Another side of this problem, worthy of serious consideration, is the enormous financial loss suffered by the farmer and stock raiser as a result of bites of mad dogs and attacks on their animals. It is impossible to get the exact data on the number of sheep, hogs, horses and cattle which have died *(Continued on page 245)*

The LEGION of

"LIVING BLOOD for the dying." Such might be the watchwords for a unique type of humane organization in Rochester, N. Y. Acting for the purpose of supplying volunteer blood donors, the Legion of Blood Donors was founded through the efforts of a radio newscaster with the backing of a local newspaper.

Formally organized March 18, 1937, the Legion grew out of an appeal made eight years ago by a frantic father for a certain type of blood to aid his dying boy. "He'll die before sundown unless you find some one who has recovered from erysipelas to give him blood," the father pleaded. Al Sigl, veteran *Times-Union* newscaster, passed on the appeal to his radio listeners. Twenty-two volunteers responded almost immediately. The boy's life was saved, and the Legion of Blood Donors was on its way.

Today, over 1,200 people in Rochester stand ready night and day to take part in a silent, gripping drama of life and death. Membership in the Legion is voluntary, the only quali-

BLOOD DONORS!

By ARTHUR JOHN COLLINSON

fication being to offer one's life blood in the service of others. Members are called on in an emergency when ordinary channels of obtaining blood donors are unavailable. They serve without pay and remain anonymous. Offering life as a gift, members have donated blood to people as far away as New York City, Chicago, New Orleans and points in Canada.

The Legion of Blood Donors has had a remarkable record. Up to January 1940, more than 970 blood transfusions had been made. Local hospitals have been most enthusiastic in their praise. Nationwide recognition has been accorded in press reports, radio flashes and in magazine articles.

The smooth running organization of the Legion is comparatively simple. Volunteers contact the *Times-Union* newspaper. Pertinent data are taken: name, age, home and business addresses and telephone numbers. Arrangements are made to have the volunteers typed into one of the four classifications at a local hospital. The new Legion member is then on call at all times to help some sick person fight a battle against death.

Since its inception in 1937, volunteers have literally flocked to join Al Sigl's Legion of Blood Donors. They have come in groups from civic, public and military organizations and as individuals. Typical of the volunteer spirit was that of a blind man offering his blood. "You may mark me down as a willing volunteer to give blood transfusions. I had infantile paralysis, and it left me stone blind. I am willing to do all I can to help others."

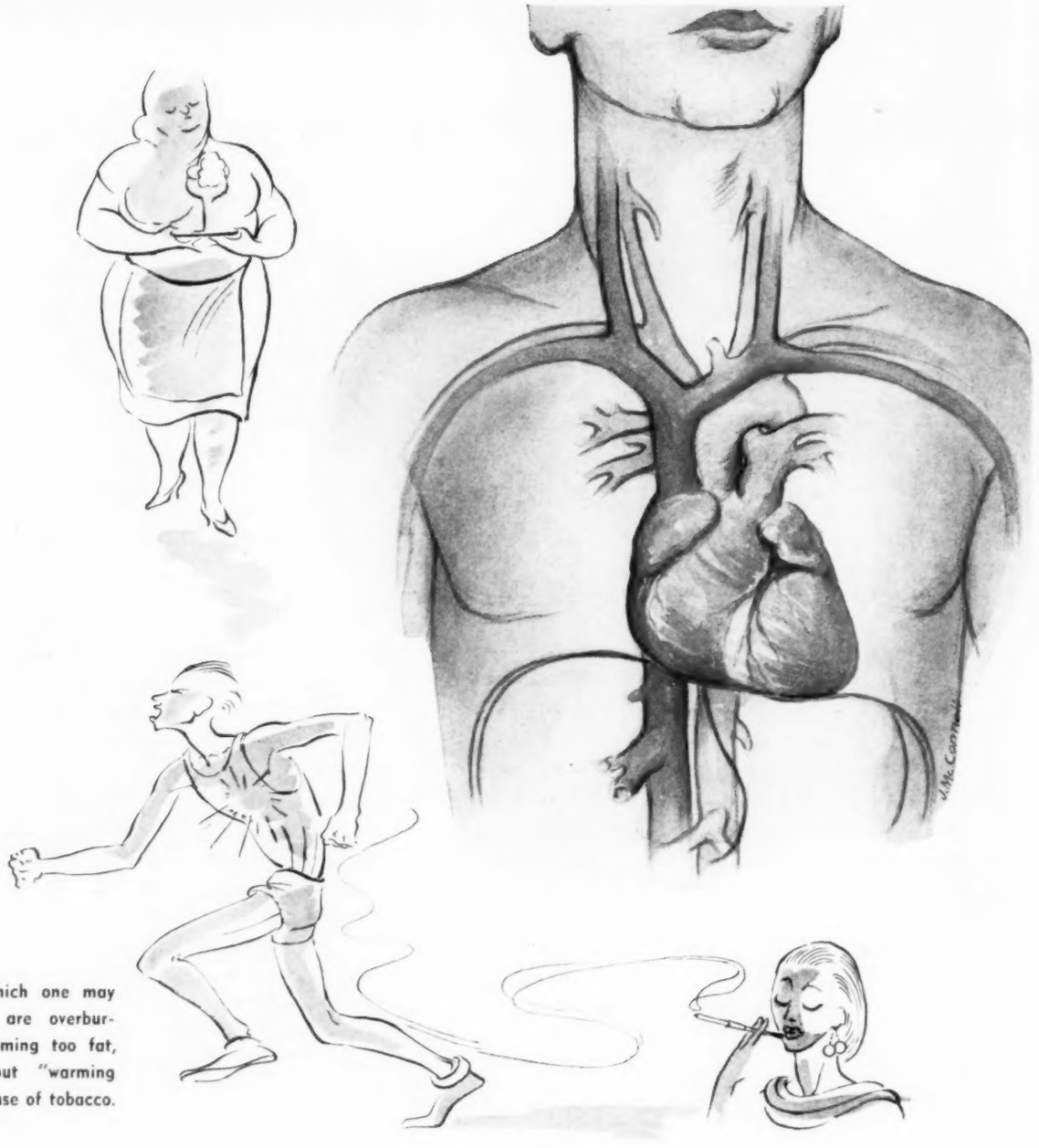
The Legion takes its recruits from all walks of life, men and women alike. Thrilling is the story of one courageous Rochester woman who answered a mother's request from Canada for blood to aid her son infected with the deadly Streptococcus viridans. Mother of four daughters, this woman responded to the call immediately. She was flown to Detroit, her first ride in an airplane, and then rushed through the tunnel under the Detroit River to Windsor, Ont. Immigration formalities were swept aside with the words "blood donor." After she was safely home, having done her little bit for humanity's sake, she said simply, "All I knew was that some one needed help. There was nothing for me to do but go."

Much of the effectiveness of the Legion comes from its having the four types of blood available at a moment's notice. Speed in answering distress signals has meant the saving of many lives. A hurried call is placed by a hospital to Al Sigl or the *Times-Union*. With over 1,200 names on file, little time elapses before a blood donor is found. Often a general appeal is made in a radio spot announcement. Occasionally police cars help in rushing aid to urgent cases. Last July, for instance, an emergency call was received. The police department was contacted, and 4 minutes later a squad car rolled into the hospital driveway with a volunteer from the Legion's list!

Already the Legion of Blood Donors has become of nationwide interest. On Oct. 6, 1939, over a coast-to-coast network, the National Broadcasting Company gave national sponsorship to the Legion's work. From New York City came a studio dramatization of the accomplishments of the Legion. From Rochester, Mr. Sigl gave a brief account of the origin of the volunteer blood donor idea. Then from Chicago, Morris Fishbein, of the American Medical Association, told of the value of blood transfusions. This thirty minute evening program was concluded with a talk by Frank Gannett, editor of the *Times-Union* in Rochester, who lauded the fine work done by the Legion of Blood Donors in that city.

At the conclusion of the broadcast, sixty-two stations carrying the program were set up as local recruiting stations to receive volunteers for Legions of Blood Donors in their respective cities. The new groups took the name of Blood Donor Leagues but were directly patterned on the organization so successfully carried out in Rochester.

There are now fifty-six communities served by Blood Donor Leagues with a total membership close to 98,000. Its value recognized, the adoption of the blood donor idea throughout the United States and Canada has been inevitable. Living blood for the dying should save thousands in the future just as it has saved hundreds in the past.



Three ways by which one may abuse the heart are overburdening it by becoming too fat, overexertion without "warming up" and excessive use of tobacco.

CONVERSATION among men about their respective automobiles most frequently stresses the ability of the engine. Its remarkable power, its quick pick-up, its ability to maintain speed for a long time, its long life without repairs, its quietness and its many other extraordinary qualities are all considered fully. Others may admire the lines of the car, its beautiful interior finish, its ease of driving or its streamlined appearance; but however much these may be appreciated, it is always the motor that holds the prospective buyer's thoughts.

In the human machine the parallel is close. The engine is equally important but infinitely more wonderful, enduring and efficient. We may admire the big muscles, the much expanded chest, the marvelous agility, the highly trained coordination of muscles and nerves, the healthy glow of the normal skin, beautiful hair and figure conformation; but few of us ever give a thought to that never-idle engine on which everything else depends. No organ of the human frame is more abused than its engine, which we commonly call the heart. It is overworked, poisoned, overloaded, thrown into high speed without going through the lower gears and abused in so many ways that it is difficult to enumerate them all. Yet it keeps on working away for many years, miraculously efficient in spite of its punishment. This engine is the dream of every mechanical engineer, and any engine that even remotely approached the performance of the

Wonder Stories of the Human Machine

The engine of an automobile is compared to the heart of the human being in the sixth article of this series by **GEORGE A. SKINNER**

human one would be hailed as the mechanical wonder of the age.

Inasmuch as our whole being depends on the satisfactory and continued performance of this engine of ours, it seems only good sense to know something about it—whether we can do anything to keep it going, lessen its loads, help it over difficult places and keep it up to its best at all times. Certainly it is to our interest to do so. This is one engine in which we cannot renew the cylinders by putting in a new block, in which valves cannot be ground when they commence to leak; nor can this motor be put completely at rest for repairs. It must keep going at all costs, for if it should stop even for a few seconds, the owner thereof "faints" or loses consciousness; complete cessation for two or three minutes is almost uniformly fatal. Since repairs are not possible, and all the improvements that can be made to a damaged engine must be made by itself, with such aid as we can offer by reducing the load and speed, our job is to keep it from going bad by every means known. This does not mean that we are helpless, but it does often mean that when the owner of an engine is commencing to show general wear and tear and a lowering of efficiency, he must decidedly alter his course of living and be willing to do his part in assisting his highly elastic, long enduring engine to make some readjustments, if not repairs, of its own. And it will do this to an astonishing extent, if the owner will cooperate with his mechanical adviser and follow instructions.

The human engine, like that of the automobile, is accurately designed to handle readily the normal amount it is expected to carry, besides which there is a factor of safety, so that if for a brief period the burden should be much more than was expected, the engine would still be able to function properly. No engine ever made by man, however, has such an enormous capacity to carry heavy loads through years as has the human heart. We can be so careless of this engine of ours and still keep going. No metal or lubricants known would tolerate for a fraction of the time such loads as are commonly placed on the human engine. Again like the automobile's motor, it is carefully enclosed in a tight case and operates in a bath of lubricant; but unlike the mechanical motor, its freedom of action is frequently interfered with, as its enclosure is not made of rigid steel as with the auto engine, but of soft, pliable material which is easily compressible. Hence, when needed most our engine is sometimes encumbered by pressure of other parts of the machine, and it is no wonder that occasionally it rebels at both overloads and mechanical interferences. If given a reasonable opportunity, it will carry its load easily, and so quietly and unobtrusively that we never realize it is working every minute of every day.

Our engine is still a four cylinder model, for in spite of the new and multiple cylindered engines—up to sixteen or more—we must continue to hold to the type that has given so much satisfaction through the centuries.

The cylinders of this human engine are fired regularly under normal conditions at about 70 per minute. It may be accelerated to over a hundred and remain there for a considerable time without appreciable damage, and sometimes it slows to 60 or less, particularly during periods of rest and sleep. In some perfectly normal hearts the rate is close to 60 all the time. It is through this constant and regular firing of the engine cylinders, or ventricles and auricles, that the blood is forced to all parts of the running gear and the human machine as a whole continues to function.

Practically every human being starts life with a perfect engine. It is carefully protected, grows as the owner grows and increases in power in proportion to the needs of the whole machine. It is not easily injured, and

many accidents may take place which may injure other parts of the human being, as well as the man-made machine, without disturbing the engine. Accidents do occur, however, that upset the action of the engines of our cars, as well as other more exposed parts. The frame may be so twisted that the engine bearings are no longer in perfect alinement. Valves may be sprung and valve stems bent. Cylinders may be cracked, water jackets broken, pistons bent and crank shaft fractured. So it is with the human engine. Many diseases and injuries pass it by completely, but there are others that seem to take special "pains" to damage this vital organ.

The premier among such diseases is rheumatism, an inaccurate name for perhaps a number of types of infection. It is common in childhood and frequently does irreparable damage to the heart. We have yet to learn to prevent such accidents entirely but can do much toward preventing the causes, which are usually infections. These may be passed into the system by bad tonsils, adenoids, teeth or defects in the upper breathing passages. These can mostly be corrected by skilled treatment. Another thing that can be done, but is frequently neglected, is to keep the little patient quiet until all possible damage has been repaired. This often takes a long time, much longer than many parents are willing to believe is necessary, and the active child overcomes the advice of the repair man, and he is allowed to get up and run about. Such incomplete repairs are caused by this undue haste that fatal defects are likely to develop in early middle life, and many of the deaths from heart disease at the most productive period of life are due to this lack of adequate repairs in youth. If time is given for nature to do the best possible repair job at the time of injury—and it may take a year or more to complete this work—the repairs are often so well made that a long and useful life is possible in spite of the early damage.

A number of other diseases may seriously hurt the heart. Among these, none are more serious than the venereal diseases, syphilis and gonorrhea. The heart symptoms of syphilis are usually felt some years after the disease is contracted, and the effects are slow and insidious in onset. Syphilis causes damage largely through its effects on the blood vessels, somewhat like a slow stopping up of the gas line between the tank and the engine of an automobile. Gonorrhea may attack the heart valves and cause serious and permanent damage in a short time, like burning out the valves when they get in too much carbon. Prompt and proper treatment in both conditions will do much to minimize the damage.

All acute disease have some effect on the human engine, for it must often work under difficult conditions: too high heat, poor fuel supply, continued high speed and sometimes in the presence of poisonous substances, like an automobile engine running in oil which is decomposing into sulfuric acid. One such condition is diphtheria; even in mild attacks, the engine's performance is often seriously interfered with. Again it is necessary to give ample time for repairs. Pneumonia likewise results in tremendous burdens for the engine, and sometimes it suffers considerable damage from this strain.

All materials deteriorate somewhat through use; steels become fatigued, metals rust or oxidize and become less able to endure strains. They are less able to bend and stretch under these conditions. Human materials are subject to the same laws, and older bodies lose some of their elasticity; speed and power are somewhat reduced, and the ability to conquer strains and overburdens diminishes. This process can be retarded in both metallic and human machines by proper protective devices. Metals are plated with materials that are not subject to oxidation; they are painted with resistant paints or are encased in concrete or other substance that protects them from the action of the air. With machinery, careful attention to proper lubrication, to adjusting loads to the design of the machine and to immediate repairs of any damage prolongs the life of the machine many times. Machines that are constantly overloaded are not expected to endure long, and they do not. All these conditions are then exaggerated, and the life of the metals is much shortened. These well known facts are equally applicable to the human machine. Overloads, harmful substances, too high speed and rough going all take their toll and cause much more rapid wear than more conservative treatment.

Overloading our human machines is common. The excess is largely due to the deposits of fat on various portions of the body; it is also due to an overabundance of fuel or to running the engine too slowly to consume the fuel constantly taken on. Unfortunately this form of overloading has been generally regarded as something of a joke, but the destructive effects of thus burdening the human machine are exactly parallel to those of the metal ones. While it is still too common, there is a much better *(Continued no page 252)*

★

GOOD BREAD...

a wholesome source of necessary calcium

EVERYONE realizes that sufficient calcium is an absolute necessity in the daily diet. But not everyone knows what foods provide dietary calcium in appreciable quantities.

Recent scientific investigations show that white bread made with the usual milk solids is about three times as rich in calcium as former analyses would indicate. The average baker's loaf of this bread has now been shown to contain about .08 per cent calcium—approximately the same proportion as in cottage cheese.

This means that six slices of such bread a day will supply nearly one-third of the minimum calcium requirement of the normal person.

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THE MOST COMMON FORM OF CANCER

—and what you should know about it

GASTRIC CANCER—STOMACH CANCER—is the most common form that cancer takes. And it causes the largest number of cancer fatalities.

But . . . today many sufferers are being relieved by improved treatment and operative technique. With greater frequency, cases are being recognized and treated early, with more promise of success.

There's the crux of the matter—*catch stomach cancer early.* For, when cases are recognized early enough for proper treatment, the chances of cure are distinctly increased.

What can *you* do about it? Don't delay letting your doctor know about any symptoms that might mean the beginning of stomach cancer. The symptoms are sometimes vague, but usually definite. Here are some to look out for:

Persistent lack of appetite; unexplained, persistent indigestion, coming on rather abruptly and aggravated by meals, particularly meat; feeling of pain or soreness after eating.

These signs may not mean that you *have* stomach cancer. But they *do* mean you should see your doctor right away. And if he has reason to suspect cancer, he may recommend a systematic search for the disease by X-ray, the flexible gastroscope (a modern telescopic instrument that "looks around corners" of the stomach), and other up-to-date methods.

The experienced X-ray specialist usually can recognize cancer of the stomach with accuracy and dispatch.

Remember, there are few diseases in which early diagnosis and proper treatment are of such vital importance as in gastric cancer. Your chances of cure are much better when you act promptly. And when today's improved, expert gastric surgery comes to your aid, it is remarkable how quick and complete recovery may be, provided the disease has not had time to spread.

For further information about cancer, send for Metropolitan's free booklet, "A Message of Hope." Write to Dept. 340-Z

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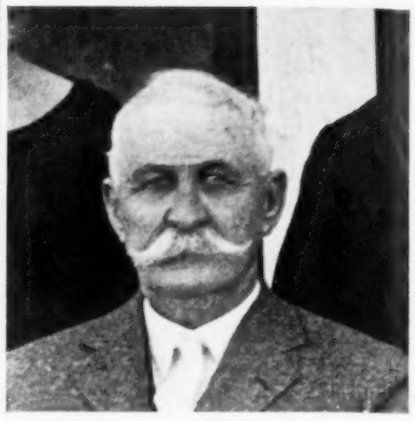


WILLIAM P. MOORE, M.D.

A TRIBUTE

In deference to the memory of a country doctor, William P. Moore, M.D., the people of the locality in which he practiced for nearly fifty years recently contributed enough money to erect a handsome marble memorial at his grave. Dr. Moore had died two days before Christmas in 1932 after serving the community of Portland, Tenn., as friend, physician and counselor. He had officiated at the births of nearly 10,000 persons during his half century of practice there.

The memorial monument is made of granite and set on a marble base. Across the top on both sides is chiseled, "In Memory of Dr. William P. Moore." One line across the bottom on each side reads, "Erected by His Friends." Donations were received from all parts of the vicinity he served, and in less than two months after the announcement was made of the intention to erect such a memorial, the entire amount was subscribed.

Dr. Moore is described by the people of this section as the family doctor at his best. His presence in the home where illness prevailed was considered frequently to be worth as much as the medicine he prescribed, although he was regarded by members of the medical profession as well as others as a highly successful physician.

CHEESE

CHEESE is a concentrated form of milk. When milk sours, the protein, minerals and fat form lumpy solid masses that separate from the water naturally present in all milk. It is from this curd that cheese is prepared. There are over 400 varieties of domestic and European cheese, and only experts are familiar with all of them. Cheddar, cream, cottage, Swiss, Liederkranz, Parmesan, Roquefort and Camembert are great favorites with Americans. All the various types of cheese except cottage and cream cheese are prepared by ripening the curd with special bacteria or molds. The ripening process gives to cheese its special type characteristics.

To use more cheese is an easy way to use more milk. A pound of Cheddar cheese represents the protein and fat of a gallon of milk. The protein of cheese yields all the nutritionally essential amino acids, and the fat of cheese contains vitamin A. Cheese is also rich in calcium and phosphorus, since these elements in milk are largely in combination in or with the protein. A hundred calory portion of cheese furnishes approximately 300 international units of vitamin A and 40 Sherman-Bourquin units of riboflavin (vitamin G). Cheese is thus a product in which some of the nutritive values of milk have been much concentrated. When compared with most other foods of animal origin, cheese is an economical food.

It is a mistake to think that cheese is indigestible. Eaten in moderate quantities and thoroughly chewed, it is as easily digestible as meat or fish.

Because cheese is high in food value and low in cost, meals built around it are nutritious and economical. Cheese may be simply added to the dinner or made a substantial part of it as the main dish. Cheese combines with vegetables so well that it is surprising such dishes are not more common.

The nutritional merit of cheese is so firmly established that individual brands of Cheddar cheese are not considered for acceptance by the Council on Foods. However, some of the newer products, such as the processed and compounded cheeses and packaged cream cheese, are considered for acceptance by the Council.

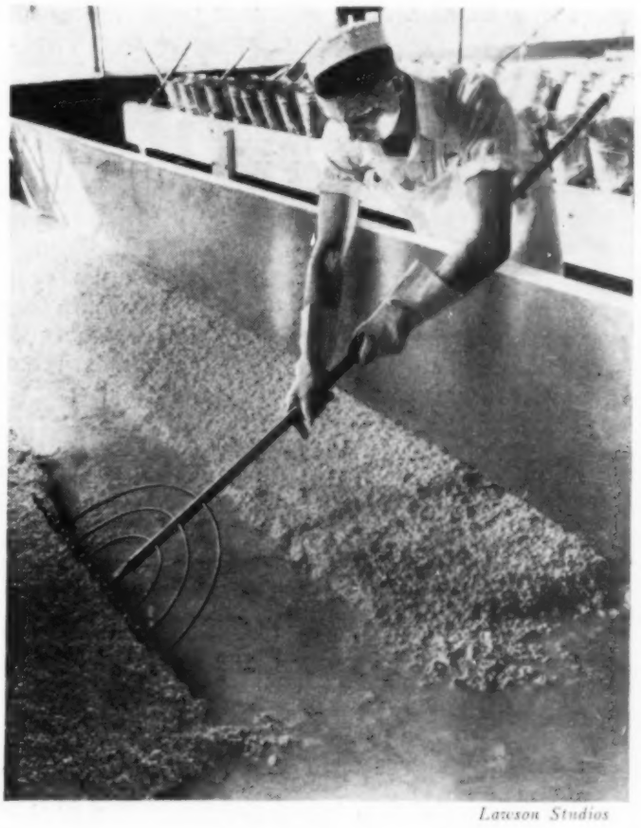
Compounded Cheese

When Cheddar cheese is melted and mixed with milk or milk products, a so-called compounded cheese is obtained. The milk products employed may be dried whole or skimmed milk, cream, evaporated milk and whey, but not all these products are used in any one compounded cheese. When whey is added, as much as 30 per cent of the whey of the original milk may be returned to the cheese. To facilitate mixing the melted cheese and milk products, an emulsifying agent is usually added. The emulsifying agent usually is a mixture of inorganic salts. Sometimes sodium citrate and citric acid are added, and it is customary to add sodium chloride. Compounded cheese is relatively soft. It is wrapped in tinfoil and distributed in cartons. The composition of accepted brands of compounded cheese is approximately 43 per cent water, 26 per cent fat, 20 per cent protein, 6 per cent lactose and 5 per cent ash. Compounded cheese has a vitamin potency in proportion to the amount and kind of cheese plus the additional vitamin-carrying ingredients.

Process Cheese

Process cheese consists of cheese, usually of the American or Cheddar variety, which has been ground, mixed with an emulsifying agent and seasoned with salt. The resulting product is soft in contrast with the original cheese and is usually of such a consistency that it can be spread. If the original cheeses have varying tastes, they are blended to produce a relatively uniform flavor in the different batches of the processed product.

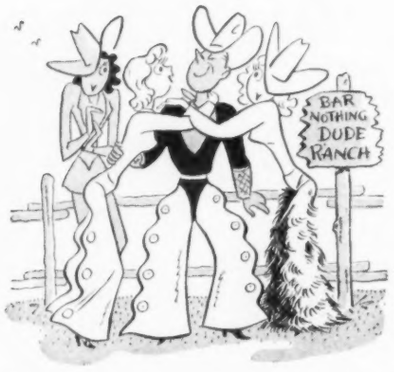
Accepted brands of processed cheese contain from 40 to 41 per cent water, from 27 to 31 per cent fat, from 23 to 25 per cent protein and 5 per cent ash. Both compounded and process cheese yield about 1,600 calories per pound, as compared with 1,860 calories furnished by a pound of American



In making American Cheddar cheese there is a process called ditching: The curd is pushed aside to drain off the whey.

Lawson Studios

FAMOUS WORDS OF ADVICE—



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ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

ASK YOUR DOCTOR ABOUT POSTUM

Cheddar cheese and 460 calories furnished by a pound of cottage cheese.

Cream Cheese

Cream cheese is made from cream with varying amounts of fat, depending on the amount of fat desired in the finished cheese. In the manufacture of cream cheese, sweet cream, usually with 18 to 20 per cent fat, is pasteurized, homogenized and cooled to 21 C. Salt and a culture of organisms which cause lactic acid to form are added. After incubation at 21 C. for twenty-four hours, the product is transferred to bags, chilled and allowed to drain. It is then packed for distribution.

The composition of accepted brands of cream cheese varies within rather wide limits, especially as to water and protein content. The content of fat ranges from 37 to 45 per cent, water from 45 to 55 per cent and protein from 4 to 6 per cent. The number of calories ranges from 102 to 119 per ounce.

A hundred calory portion (25.6 Gm.) of an accepted brand of cream cheese would furnish 0.09 Gm. of calcium, 360 U. S. P. units of vitamin A and 12 Sherman-Bourquin units of vitamin G. Cream cheese is a rich source of calcium and vitamin A. Vitamin G is present in insufficient quantity to warrant a claim, and protein is present in small quantity. In order to avoid spoilage of cream cheese it is necessary to have careful processing, storage at low temperatures and early marketing.

ACCEPTED CHEESES

The following brands of cheese are accepted by the Council on Foods of the American Medical Association and are distributed by the manufacturers, who are priviliged to use the acceptance seal:

Cream Cheese

Breakstone's Cream Crest Cream Cheese
Daisy Cream Cheese
Fairmont Cream Cheese

Compounded Cheese

Borden's Chateau
Borden's Chateau Pimiento
Kraft's Velveeta
Pabst-ett Compounded Cheese
Pabst-ett Compounded Pimiento Cheese
Pabst-ett Compounded Swiss Cheese

Process Cheese

Pabst Pasteurized Process Cheese

WATCH YOUR DOG!

(Continued from page 235)

from dog bites. Stockmen estimate this annual loss to be far in excess of $5,000,000

Few Americans realize the extent of the dog-owning fad. Obviously, it is impossible to ascertain the exact number of these beasts in the United States, for the simple reason that many states do not tax them or require their owners to obtain licenses. Even in states and municipalities wherein dogs are obliged by law to be registered, it is true that there are many more stray animals, liable to contract rabies, than there are licensed and protected ones.

To give some idea of the dog population, let us take for example the state of New York, in which two municipalities—Buffalo and New York City—have systems for independently licensing them. In 1937 there were over 400,000 dogs registered in New York City; while in Buffalo 60,000 of these animals were registered. Other communities in the state during the same year issued licenses to 407,000 dog owners. Thus the total licensed dog population in New York State amounted that year to more than 867,000. In 1938 more than 950,000 animals were registered. If we add another 500,000 unlicensed strays and animals living in cities where there is no registration, it follows that New York State had at that time a dog population of more than 1,400,000, or one dog for about every nine inhabitants.

In 1937, the license paid for this purpose in New York City amounted to approximately $725,000; but against that should be charged more than $1,250,000 for the maintenance of antirabic clinics and for the manufacture and administration of serum.

New York City health records of 1935 show that 21,459 persons, mostly children, were bitten and taken by the police to antirabic clinics. In 1936, statistics show that 23,825 individuals suffered bites, and from January to June 1937 a new high was established when 12,217 adults and children were bitten. It is also estimated by police and health authorities that each year at least 25,000 others are bitten, of whom the board of health has no record, because they treat themselves or else are attended by private physicians.

It costs New York City more than $500,000 to operate this antirabic laboratory and another $500,000 for ambulances, doctors, laboratory workers, other assistants and police, or more than $1,000,000 annually, to say nothing of the inconveniences, suffering, incidental troubles and financial expenditure experienced by the victims. Last year in one section of New York City—the Bronx—1,263 dogs were seized by the authorities, 476 of which proved to have rabies.

The bite of any dog, no matter how small, should never be ignored. Your doctor or the health authorities should be immediately consulted and treatment of the wound begun. The dog which inflicted the bite should be kept under observation for the proper length of time, about 10 days, to determine if it has rabies.

It was the great French scientist Pasteur who perfected the vaccine now used in treating this disease. In his boyhood he knew that all France was infested by mad dogs which bit sheep and shepherds. He never forgot the sight of one of his schoolmates, who, after being bitten by a mad dog, was taken to the local blacksmith shop where the smith cauterized the wounds with red hot irons, which was the accepted method of treating such conditions then. Nevertheless, the boy died, as do all who contract rabies. Today in France, the home of the mad dog, only 3 per cent of those treated with the antirabic vaccine contract hydrophobia, as a result of Pasteur's discovery.

Rabies can be eliminated from this country if the public will cooperate with health authorities by permitting dogs on the streets only when on a leash. Muzzling keeps the dog from biting but is needlessly cruel. It does not allow him to pant, which is essential in hot weather. Cities are not suitable places for dogs, because housing them in limited quarters is hard on them and may be disagreeable and sometimes dangerous to human beings. Vaccination of dogs should not be relied on either.

Medical journals have warned doctors of the dangers of rabies and of the fact that it exists today throughout the United States. *The Journal* of the American Medical Association devoted a portion of

(Continued on page 249)

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America's Favorites

The Food of the IRISH

By HARRIET MORGAN FYLER

MARCH is the month when food is wearin' o' the green in honor of St. Patrick, the patron saint of old Erin. Among the foods most often seen at this season are green minted cherries, pistachio ice cream, green iced cakes, shamrock canapés cut from white bread by means of a shamrock cookie cutter, spread with creamy cheese and sprinkled with minced parsley; lime or mint gelatin salads which contain fruit or vegetables, and green gum drop confections in the shape of harps, pipes and shamrocks. Such foods, however, are far from representing the real contribution to American cookery which various Irish dishes have made. Like Irish fare itself, that contribution is much more substantial.

There are, of course, certain American households with a background of old Erin in which traditional dishes, such as Glencannon, Boxty and Kale with Pinkel, may still be found. But the Irish dishes that Americans in general appreciate are corned beef and cabbage, Irish stew, Irish potato soup, O'Brien potatoes and Irish oatmeal.

Although corned beef and cabbage has received many slurring innuendos, it is food fit for a king when properly cooked. An unjust whispering campaign has given this noble dish the reputation of being too proletarian for the well bred dinner table. The trouble is that corned beef and cabbage have been cooked wrongly for many years. The beef has been boiled for hours, the cabbage likewise. The resulting dish has been long on odor and short on delicate flavor.

Corned beef should only be boiled for the few minutes that the cabbage is cooked with it. A temperature just below the boiling point, at a simmering temperature (200 F.), is recommended for meats which are to be cooked in water. Proteins are toughened by high temperatures and long cooking. Meat is a protein food and should not be thus abused.

Cabbage contains sulfur compounds which assert themselves in no uncertain manner when the cooking period is prolonged. Strong flavor and a strong odor result from overcooking cabbage. From 5 to 8 minutes is sufficient cooking time. This means, of course, that the cabbage is put into the corned beef stew only a few minutes before serving time. It should never be cooked for as long as an hour, or even as long as a quarter of that time. When the cabbage is put into the kettle, the lid shouid be removed and the heat increased. Cooking cabbage in a coverless kettle at a boiling temperature helps to preserve the natural color and food value. Cabbage cooked in a covered kettle is yellow, because the volatile sulfur compounds condense on the lid and drop back on the cabbage, which causes the green color to change to yellow.

A savory dressing for the corned beef and cabbage is made of two-thirds melted butter and one-third slightly sweetened vinegar. When corned beef and cabbage thinly sliced are placed between slices of rye bread spread with butter and English mustard and served as party snacks, they are in great demand.

There are as many recipes for Irish stew as there are counties in Ireland. Lamb or beef may be used. Carrots, potatoes, green peppers, leeks, white onions and celery are the vegetables most commonly used. The seasoning of one recipe for Irish stew depends on celery, parsley, garlic and whole cloves. Another recipe is seasoned with thyme and summer savory. And there are Irish stews seasoned only with plain salt and pepper. The gravy of the stew may be white or brown. But whether white or brown, it is unanimously agreed that the gravy

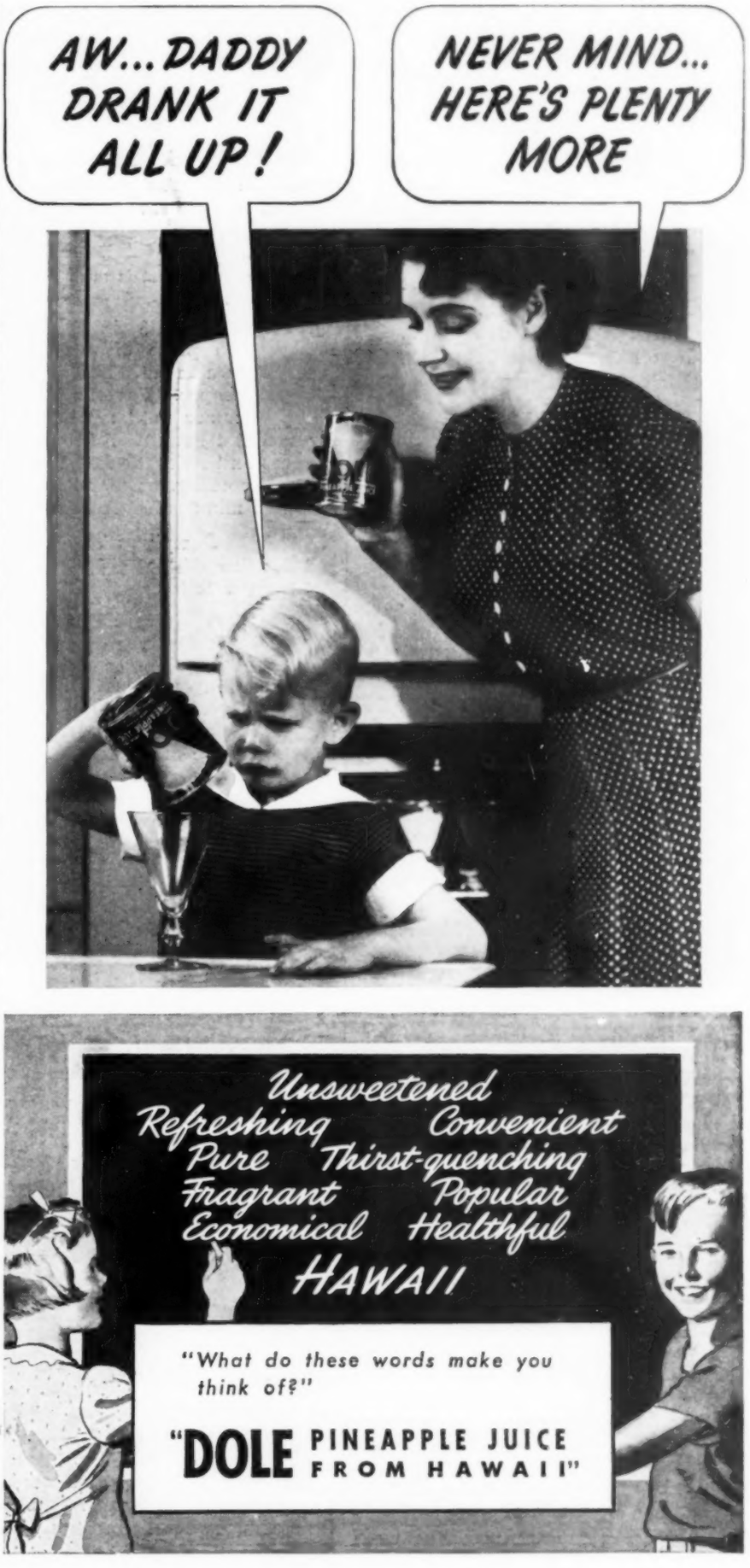
must have a rich body, containing the full flavor of the meat, which comes from slow simmering.

Always welcomed but sometimes too seldom served are Irish potatoes. Although this tuberous vegetable originated in America and was first carried to Spain by the Spaniards in 1520, it is known as the "Irish potato." The explanation for this apparent inconsistency is an interesting chapter in the history of the potato. Forty years after potatoes were first brought to Spain they were carried to Florida, where the Spaniards were establishing new colonies. From Florida, British adventurers, Sir Francis Drake and Sir John Hopkins, carried them to England.

Potatoes, however, did not appeal to the British as food, and it was not until 1771, 200 years later, that the English regarded potatoes as more than cattle fodder. At one time Europeans believed the potatoes caused fevers and other maladies. It was not until 1773, when Antoine Parmentier published his pamphlet urging the cultivation and use of potatoes, that any interest was aroused in this worthy vegetable. In order to publicize potatoes, King Louis XV wore potato flowers in his buttonhole and ordered potatoes served on the royal table. But potatoes were planted and became very popular in Ireland. When the British colonists sailed to establish settlements in New England, the "Irish potatoes" were included among the other plants and seeds to be cultivated in their new homes.

While Irish potato cakes, potato soup and new potatoes boiled in their jackets, peeled and covered with melted butter and sprinkled with a small amount of chopped fresh or dried mint, originated in Ireland, the birthplace of Potatoes O'Brien is supposed to be New York. Some thirty years ago, there was an Eighth Avenue restaurant owner who called himself "Beefstew O'Brien." According to legend, he was the person who first added the finger-length of green pepper and red pimiento to hashed brown potatoes which give them their enticing taste and color.

No description of Irish foods would be complete without Irish oatmeal. This is a whole-grain oatmeal cooked in native style: To four parts of boiling water one part of oatmeal is added, with salt to suit the taste; it is boiled briskly



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for at least 30 minutes, with occasional stirring. "It will be improving," as one Irish cook described it, the longer it is left to simmer afterward, which means all day or all night.

Beef Stew with Dumplings

- 2 pounds beef brisket
- 1½ to 2 teaspoons salt
- ¼ teaspoon pepper
- 4 cups potatoes
- 1 cup carrots
- 1 cup leeks

} cut in small cubes

Cut meat in 1½ inch pieces. Dredge each piece of meat with flour. Brown in fat. Season with salt and pepper. Cover with hot water. Simmer until meat is tender (about 2 hours). Add carrots, potatoes and leeks the last 30 minutes of cooking. Dumplings are added 15 minutes before serving.

Dumplings

- 2 cups flour
- 4 teaspoons baking powder
- ½ teaspoon salt
- 1 egg
- ⅔ cup milk

Sift dry ingredients in a bowl. Add beaten egg and milk to dry ingredients. Stir until the dry ingredients are moistened (but not until free of lumps). Drop dough by spoonfuls into the stew; keep covered until done (15 to 20 minutes). Serve at once.

Lamb Stew

- 2 pounds neck, plate or shoulder of mutton
- 2 cups peeled and sliced potatoes
- 2 cups freshly shelled peas
- ½ cup finely chopped onion
- Salt and pepper
- 4 to 6 cups hot water

Cut the lamb in small pieces and arrange in a stew pan. Sprinkle with salt and pepper, and add the hot water. Cover with a tight fitting lid, and let the stew simmer for 1½ hours. Add the potatoes, onions and peas and cook another 30 minutes. Serve hot.

Potato Soup

- 4 medium potatoes
- 4 small onions
- 3 cups milk
- 2 cups water
- 3 tablespoons flour
- 3 tablespoons butter
- 1 tablespoon chopped parsley
- Salt and pepper

Boil the potatoes and onions together until tender. Drain off the cooking water, and save it. Rub the vegetables through a coarse strainer. Make a white sauce of the milk, cooking water and flour and fat, and combine with the sieved potatoes and onions. Season with finely chopped parsley, salt and pepper. Serve hot with toasted croutons.

Potato Cakes

- 2 cups mashed potatoes
- 2 eggs
- 2 tablespoons butter
- ½ teaspoon salt
- ¼ teaspoon paprika
- 2 tablespoons chopped mint leaves
- Sifted bread crumbs

Add one egg, fat and seasonings to the mashed potatoes. Shape into cakes, dip into beaten egg, roll in finely sifted crumbs, and fry in a small amount of fat in a skillet or in deep fat (375 to 390 F.) until brown.

Potatoes O'Brien

- 6 medium-sized potatoes
- ½ cup finely chopped pimientos
- ½ cup finely chopped green pepper
- 2 tablespoons finely minced onion
- Salt and pepper

Wash, pare and cut potatoes into half-inch cubes. Dry between towels. Fry in skillet with just enough fat to keep them from burning until brown. They should be turned frequently during cooking and not pressed close to the pan. The pimiento, green pepper and onion are added when the potatoes are partially done and cooked the remaining period.

A St. Patrick's Salad

- 1 tablespoon plain unflavored gelatin
- 2 tablespoons cold water
- 1 cup boiling water
- 1 cup sieved avocado
- 4 teaspoons lemon juice
- Salt

Soak gelatin for 5 minutes in cold water. Add boiling water, and stir until dissolved. Add other ingredients, blend well, and pour into a ring mold which has been rinsed in cold water. Chill until firm. Unmold and fill the center of the ring with cottage cheese mixed with chopped chives. Individual salads may be made from this recipe, using small ring molds or shamrock shaped molds.

Chicory, or curly endive, as it is sometimes known, makes an attractive green for any jellied St. Patrick's salad. But watercress, if it is crisp, is even more attractive, especially if served on light or neutral toned plates.

WATCH YOUR DOG!

(Continued from page 245)

its issue of May 22, 1937, and a leading editorial to the seriousness of the situation.

The dog should be banished from large cities or rigidly controlled. There is a precedent for exclusion; other animals are excluded from living in towns, though they are not as dangerous as dogs. Of course, cows, pigs, sheep, goats and chickens are unsanitary, unclean and at times cause disease. New York City, less than seventy-five years ago, maintained a herd of 56,000 pigs, which were turned into the streets in the morning to eat offal and garbage and which returned to their sties at night. Today modern communities have done away with the swine as street cleaners and dispose of their refuse in a sanitary manner, thereby improving the health of the inhabitants.

Some day—and I hope that day is not far distant—dogs will be excluded by law from cities, as is being done today in many European communities; they will be banished to the country, which will be much better both for them and for mankind.

HEALTHGRAMS

FROM ARTICLES IN THIS ISSUE

¶The highest degree of medical training, experience, skill and stamina is often required in carrying out proper diagnostic and therapeutic procedures in thyroid diseases. *See page 200*

¶Children have more right, certainly, to demand good parentage than parents to demand good children. *See page 206*

¶Maternity should, and usually does, improve the posture. *See page 209*

¶Pneumonia is a disease of crowds, and crowding gives an increased opportunity for spreading the disease. *See page 212*

¶Lack of pain and a feeling of well being are the chief reasons why the danger signals of cancer are neglected. *See page 218*

¶Living blood for the dying should save thousands in the future just as it has saved hundreds in the past. *See page 236*

¶Colds are probably most infectious to other persons during the first day or two, when the symptoms are just developing. *See page 272*

Acknowledgment

The ideas as expressed in the last paragraph of "The Psychology of Sex" by Reynold A. Jensen (page 155) were originally expressed by L. F. Shaeffer in his book "The Psychology of Adjustment."

SALLY: Perhaps you've heard about Post's 40% Bran Flakes, Dot! The most marvelous-tasting breakfast cereal you ever put in your mouth!

DOT: Goodness—it *must* be delicious for you to be so enthusiastic about it, Sally!

SALLY: Yes, and Post's Bran Flakes are *much more* than a wonderfully fine-flavored cereal—They give you two important *extra benefits* . . .

First, Post's Bran Flakes provide just enough bran, a *natural* regulator, that helps protect you against sluggishness. People whose systems are irregular, due to lack of bulk in the diet, find Post's Bran Flakes, eaten daily, a wonderful help.

Second, Post's Bran Flakes are a good cereal source of phosphorus, iron, Vitamin B_1 to help maintain appetite . . . and today, Post's Bran Flakes come to you at a NEW LOW PRICE!

SIX MONTHS LATER . . .

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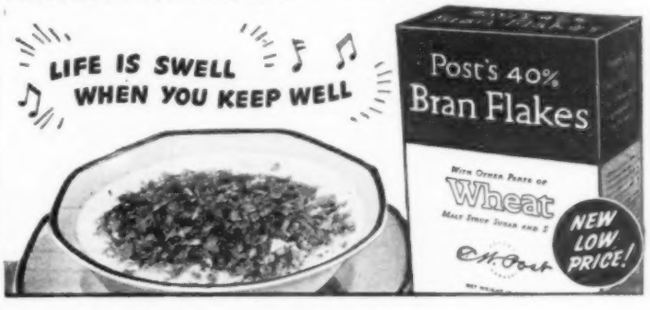
SALLY: And you're a different girl, too! Isn't it wonderful to find a cereal that tastes so delicious and gives those *extra benefits,* too!

IMPORTANT: Post's Bran Flakes, due to their bulk, are a regulative cereal. Constipation due to insufficient bulk in the diet should yield to Post's Bran Flakes, eaten regularly—as a cereal or in muffins. For cases not corrected in this simple manner, a physician should be consulted. Post's Bran Flakes are a Post Cereal—made by General Foods.



THE SWING-AGE YOUTH

(*Continued from page 208*)

urge. The purpose of this is a primordial necessity, and we see it demonstrated among all the higher animals. Manifestly the youth and the maiden must learn control from the first. This can be brought about not only by proper information and a home training of high moral and religious standards but also wholesome amusement and recreation absolutely devoid of anything remotely suggestive of sex, which would exclude some of the motion pictures and many of our popular periodicals, cheap novels and newspapers. The best and most beneficial recreation is obtained in the great outdoors. Plenty of outdoor sport of the proper nature causes a healthy physical fatigue and is one of the best preventives of improper sexual thought and urge.

Our present social structure demands chastity until marriage. The young people must learn to live side by side and enjoy each other's company. Failure in such control leads of course to the tragic spread of venereal diseases, which destroy the later health and efficiency of individuals, choke family happiness, lead to degeneration and death and blot more families than any other cause of family extinction. Proper training can eliminate this uncontrolled, unthinking, youthful folly.

There are two general principles which may govern in this instruction of youth: Instruction to form the basis of habits during adolescence and subsequent years must be started in early childhood and preadolescence and continued after puberty; instruction must be positive and constructive, so that high ideals of life will be firmly established. There are probably six fundamental ideas for the parent or teachers to have in mind; each person should be fully cognizant of the meaning of them and learn a language of simple but explicit words of description to make their information wholesome and interesting.

1. A recognition of the sacredness of life.

2. A recognition of the sacredness of motherhood. These are to be given in early childhood: boys as early as 6 years, girls, at 5 years.

3. A recognition of the sacredness of the family circle and fatherhood.

4. A recognition of the sacredness of the body as the temple of womanhood and manhood. This should be imparted in the pre-adolescent period: boys, 10 years, and girls, 9 years.

5. Establishing wholesome thought, habits and modesty in our daughters and chivalry in sons.

6. Establishing hygienic habits which will be conducive to the development of perfect physique and maintenance of perfect health: boys, at 14, girls, 13.

The mother should establish a bond of comradeship with the child during all the years of early childhood and pre-adolescence, with herself acting as the leader. She should gain his confidence by always being interested in his play and work. She should not just casually ask him at meal time in front of the rest of the family how this or that progressed during the day; but a quiet moment when she is alone with the child is a better occasion for little talks.

Remember, adults do not confide their secrets to any one who might criticize unjustly and later will tell some other person about the confidences. A child feels exactly the same way, even though his secrets are trifling. Then, too, you must have your child's confidence in order to approach the sex problem correctly.

When the young child asks where he came from, don't put him off with an evasive answer, but satisfy him with a truthful explanation which his years can understand, and urge him to ask any other questions of you at any time. Tell him that you will inform him better than any one else.

Later on, at the age of 9 or 10 years the second group of life lessons should be started. It is most ideal if the father will instruct the boys and the mother the girls. But the father may shirk his responsibility and the mother must tell both daughter and son about the origin of life. As the boy advances to the age of 13 and during his later years when the last two fundamental ideas of the group are to be instilled, it is absolutely necessary that a man give this information. The ideal person is the father, especially if he has given the time to become pals with his son and has his son's confidence and respect. The father may be willing but lack a knowledge of how to start talking. In this case, the mother can get the proper books from the library so the father can instruct himself.

However, if the father does not do his part, it is up to the mother to see that the boy obtains this instruction in two or three instalments at the ages of 13 to 15 and 17 years; some able, older man in whom the boy has confidence and admires, may be able to help. It may be the family physician or a school teacher or a clergyman. But before you send your son to any of these men, consult them beforehand, and take a book of proper information for the age with you, and ask the person if he will instruct along these lines. For there are not so many men as you might think who are properly informed as to how to progress with this sex information.

Remember that even though we Swing Age parents were the dutiful children of the past, we must assume our responsibilities with our present day knowledge in training our children. In order to stem the tide of inmates in our penal institutions and our hospitals for the insane, we must not only set an example for these children but emphasize continuously the better things of life, for the outside world flaunts its evils from the cradle onward.

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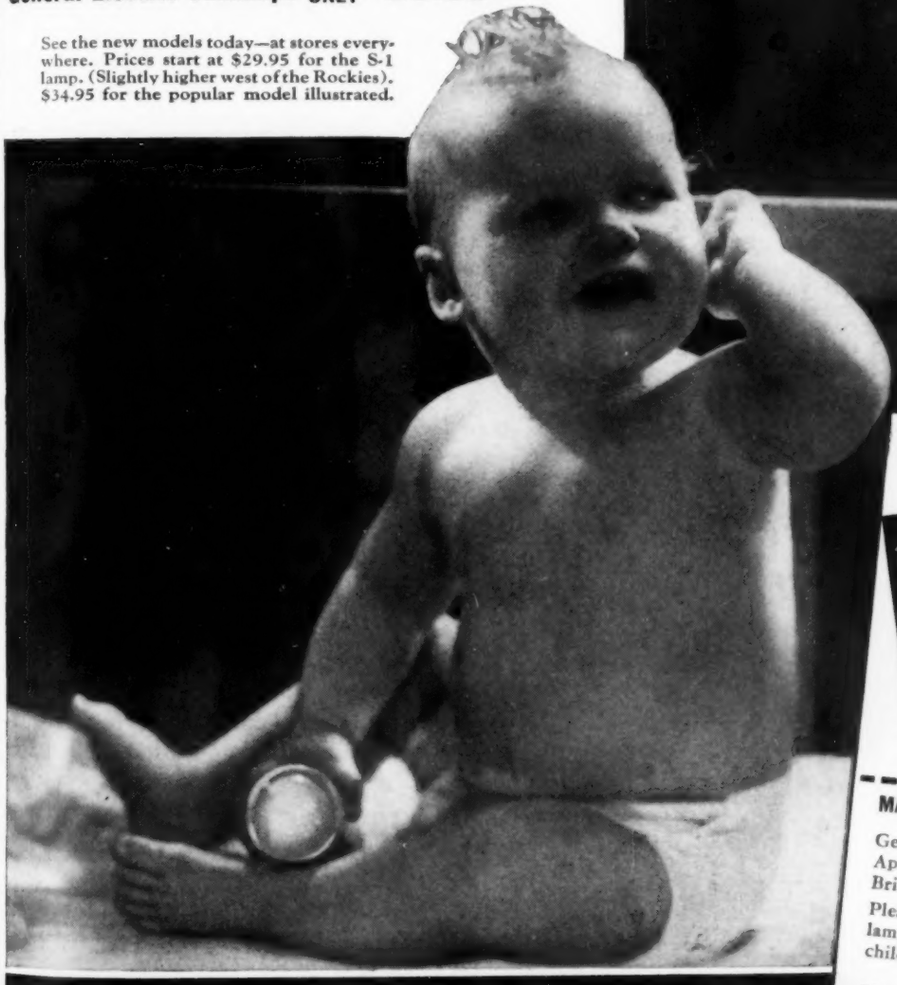

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Sunlamps

WONDER STORIES of the HUMAN MACHINE

(*Continued from page 240*)

understanding of its consequences, and many are now much more considerate in this matter than formerly. To be sure, there is a constant utilization of fuel by the human machine, because parts of it are always "running" so that even in repose, fuel is being consumed. But more careful adjustment of the supply of fuel to the consumption of the machine is highly desirable.

Not so many years ago we used to lay our autos up in winter, because it was difficult to get them started when it was cold, the radiators froze easily, and we were not prepared for road conditions in winter. All that is changed now, and we expect our cars to run the year round regardless of weather, which they do. But the chemistry of the fuels is most exact, and much advance has been made in providing proper gasoline and lubrication to operate under the more severe conditions of cold weather. The chemistry of the human body is much more complicated than the ordinary commercial chemistry and varies to take care of the untold number of processes constantly going on in our machinery. It is not surprising, therefore, if occasionally something goes wrong and compounds that we do not expect or need are produced instead of those that we can utilize to the best advantage. Under conditions with which we are not always familiar, "by-products" of chemistry of the body occur and may damage the system more or less extensively. This tends to increase the rapidity of wear and is sometimes produced in what appears to be normal health. Usually, however, we do something that prevents the body from acting at its best, and if we make a careful search, many times the troubles can be located.

The formation of damaging substances may result from taking on much more than the body can utilize, from not getting rid of its wastes properly and promptly or from imbibing or inhaling substances that damage the body. Some of these substances act on parts of the mechanism which prevent the engine from transmitting its power properly to the moving parts. Many of the effects of these substances are produced without warning, and we cannot always prevent their consequences. There are some, however, that we do know thoroughly and which are often capable of doing a good deal of damage, especially when used excessively and continuously. Under this heading come such substances as tobacco, alcohol and drugs, all of which may cause irreparable damage to our engines. Especially when the heart is damaged are these substances a great handicap.

All engines, especially those that depend on explosions, such as gasoline engines, function much more certainly and satisfactorily when well warmed up. At automobile races we see and hear the engines being warmed up, and no airplane pilot will take off on a trip until his engine has been running some time. A cold engine is much more likely to stall than one that is well warmed. During this period, the metals expand, and the parts fit together better; the oil gets thinner and so flows more freely, and gasoline volatilizes much more readily at the higher temperature. The human machine is not unlike this and functions more smoothly after a period of "warming up." We see examples of this in any athletic game. Preliminary exercise gives the necessary time for the heart and blood vessels to adjust themselves to their greater loads and is one of the most valuable and necessary requisites of exercise, especially if it is to be long continued and strenuous.

We have seen that in youth there is much more elasticity than in middle, or old age, and on this account many things can be safely done by the young that cannot be continued into later life with equal safety. Sudden acceleration of the heart that always accompanies suddenly increased activities, can be easily accommodated in youth, but in later life it is likely to cause some disturbances. Most of us have noticed it after running for a street car or train, when the effort was rather violent though perhaps not prolonged. We breathe rapidly and deeply for a time, sometimes an unduly long one, and if one should take his pulse, he might find that his heart not only was beating hard, but it might be somewhat irregular. Now if the same effort had been made after a period of warming up, most of this would have been eliminated, for the control mechanism would have had time to adjust to the greater load. The practical application of this may be made in many ways in daily routine but especially during the annual vacations. Numerous business and professional men are so occupied with routine duties, most of which are sedentary, that they do little to keep up regular physical exercise. Unfortunately, the usual efforts to get in a week's or a month's exercise in a single afternoon are not a success, never have been and never will be. Muscles to be in good condition (and the heart is a powerful muscle), must be used regularly and often, even if not for long each time. A small amount of exercise taken daily is much more valuable to the whole physical economy than an excessive amount occasionally. The former is of lasting benefit, the latter likely to be not only harmful but often actually destructive. Many a man of apparently fine physical condition, and at a time of life when there should still be many years of active life ahead, goes on annual vacation, to return as a complete invalid. This condition usually results from a strenuous hunting or fishing trip, where a man, soft from long lack of exercise, tries at once to keep up with or exceed the pace of a guide, hardened by years of constant life in the open, and the result is often tragic.

Now if the person contemplating such a trip will prepare for it as he would train a fine horse for a race, or condition his hunting dogs, he would probably stand it with little difficulty. The heart is an engine of tremendous latent power and can develop to withstand most astonishing strains, but it must have time to do it. Therefore, gradual building up to the necessary resistance will eliminate most of the tragic results of vacations, and proper preparation affords the only safe way to exercise. The heart will at once work to the limit of its capabilities; then it will stretch, and once the muscles stretch (or we have an enlarged heart) the chances for a comeback

are slight. Time is a much more essential element in the preparation of the human engine for hard work than it is for the automobile engine. We even train the youthful athletes carefully over a long period of time before they are allowed to play in the big games. Yet men of middle life, perhaps once athletic, will undertake entirely without training, tasks at which youth would hesitate. In business such actions would be classed as poor judgment, but physically it is often a fatal mistake.

Nothing on this earth is more wonderful than the human engine. It is entirely automatic, works for years uninteruptedly, rarely needs repairs that it cannot make itself, carries loads much in excess of normal, adapts itself quickly to the body needs and will continue to work, even though sometimes badly damaged by carelessness or misfortune, long after any other engine would be on the scrap heap.

NOTE.—This series of articles is being reprinted. The articles will be available separately about three weeks after their appearance in HYGEIA for 15 cents each, postpaid. The entire series will be available in June 1940 in an attractive box file for $1 a set, postpaid.

Next month, Dr. Skinner will consider the "exhaust" of the human machine.

Dangers of Self Treatment

The dangers of self medication, particularly the use of "cold cure" tablets containing a chemical combination of cinchophen and guaiacol, are again emphasized in *The Journal* of the American Medical Association by Cyril M. MacBryde, St. Louis, who reports the serious illness of a mother and the death of her son as the result of severe liver damage from the use of such tablets.

In pointing out that the dangers of cinchophen have been repeatedly emphasized by many writers, Dr. MacBryde cites collected reports of poisoning from the drug in which the death rate ranged from 43.6 per cent to 46.8 per cent. In spite of the evidence of the high toxicity of the drug, its widespread use continues.

Dr. MacBryde cites reports in 1931 which estimated that 90,000 pounds of cinchophen were consumed annually in the United States. He refers to one report which stated that thirty-two drugs in common use contain cinchophen and estimated that 500 others undoubtedly contain it.

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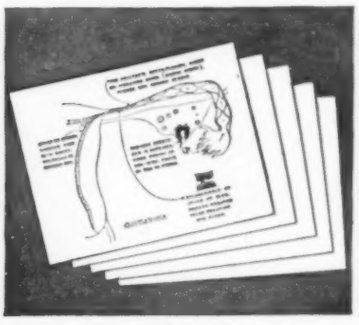

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GOING TO THE HOSPITAL?

(*Continued from page 232*)

headaches and make sure they wear their rubbers.

The day you go to the hospital ought to be a day of peace, relaxation and fun. Have all your preparations made, your bag packed. Tell the children goodby when they go to school. Dress and then go to town. Walk about, savor all the things which are so normal, so regular and which you will most miss when you are flat on your back.

Most doctors will let you eat a regular lunch the day before operation; but don't overeat. No cocktails, lobster Newburg or dill pickles. Eat a simple, delicious meal sometime before 1 o'clock. Then go to the theater, flower show or a good movie.

If your husband is taking you to the hospital at 5, your doctor may be willing for you to have your tea and toast (that's the only supper you're allowed) with him, while he eats his dinner. If the doctor wants you to eat in the hospital, you should; but unless he actually asks you to get in at a certain hour, your only duty is to be there sometime before 7 o'clock and not to have eaten anything but tea and toast after 1 p. m.

When you're in bed, alone in your room after your husband is gone, you'll be glad of your books, your sewing or knitting. Sit up, read, write or knit. At 9 you will be scrubbed, maybe shaved and anointed with iodine. You may be given an enema. Then you'll get a pill or a hypodermic.

You may drink as much water as you like until three hours before the operation. Stop then, even if you're thirsty. At 7, if it's a 9 o'clock operation, you'll be washed again. If you're lucky, you may be allowed a shower. Then you'll get another enema.

Nausea is sometimes unavoidable; but by having eaten lightly and having had an enema or two, your doctor will have made sure that there is no food in your intestines. Therefore, you won't be nauseated much when you come out of the ether, unless your operation was terribly long and you were badly shocked.

Now the fatal hour is approaching. The next three pills you get will really put you to sleep. You may come to for a moment or so when you get your final hypodermic, but it won't be for long. All you will hear is a soothing masculine voice saying, "Breathe deeply, please. Don't be afraid." All you see is a sort of movie of bright lights, men in white with caps and masks and their concerned blue and brown eyes staring at you anxiously, for you were not supposed to have wakened up at all!

Don't worry about not getting enough ether. The doctor not only won't, but can't operate until you are relaxed. If you don't believe me, lift your right hand up straight from the elbow, take two breaths of gas, and I'll bet you a dollar you won't know where your hand is for seven hours.

Don't mix your drinks too soon after you are out of ether, either. Ice cold orange juice, chocolate malted milk and ginger ale within a space of three hours will make a better stomach than yours queasy. Be abstemious, and drink water, even if it doesn't taste so good. The chances are it will stay down better. Drink as much as you are asked to. If you vomit much, you must be careful to replace the moisture you have lost. If you don't, you may become dehydrated and really ill.

When you're coming out of ether, don't try to move much, don't be too smart. Don't try to get anything for yourself. Ring for everything you want. You won't know just how you feel for several hours. Don't take chances of straining or tearing yourself while you're still groggy by trying to get up and go places. This is neither the time nor the place to be a show off.

Don't try to reduce after an operation. It's a poor time to try to lose weight. To get well you must build strength with good blood. Eat regularly, simply, wholesomely and only what the hospital provides. Send home liquor, candy and fancy high-flavored foods or candies, such as anchovy paste or crystalized fruits, nuts or rich chocolates to devour later. If you feel you must reduce, ask your doctor for a diet list, and start after you are truly convalescent.

If you're not taking a nurse home, stay an extra day or week in the hospital. Get used to walking the corridor. Try a few flights of stairs, sit in the sun room. It is impossible to go home to a busy household run by one maid, tumble into bed and expect hospital service, good trays, back rubs and absolute quiet. You won't get them; or, if you do, you'll wear your maid out, and by the time you get up, she'll be having a nervous breakdown.

Until you feel extra well, the noise of the children, the creaking of the household machinery, the whole familiar pattern will tend to make you nervous and retard your recovery. So I warn you, don't leave the hospital till you feel equal to meeting most of the demands your home will make on you.

You'll get well twice as fast if you don't try to hasten your recovery too much. Wait a while before you tackle long motor drives or heavy lifting. Don't fill your days too full of outside activities until you feel really well enough to enjoy doing things.

Plan ahead when you have to go to the hospital. If you do, you can rest and relax and get well quickly and be a credit to your doctor. It's a wise mother who can go off duty for three weeks and have her house run as smoothly and happily while she is getting her strength back as when she is present. Try a "planned hospitalization" the next time you go to the hospital, and see if it doesn't save you a great deal of unnecessary worry. Indeed, it may actually cut your convalescence time in half and leave you the happy task of explaining to your neighbors that "it really wasn't very much of an operation" because you were up and about, looking as fresh as a daisy, within an amazingly short space of time.

Anyway, if you must go to the hospital, good luck to you, and get well soon.

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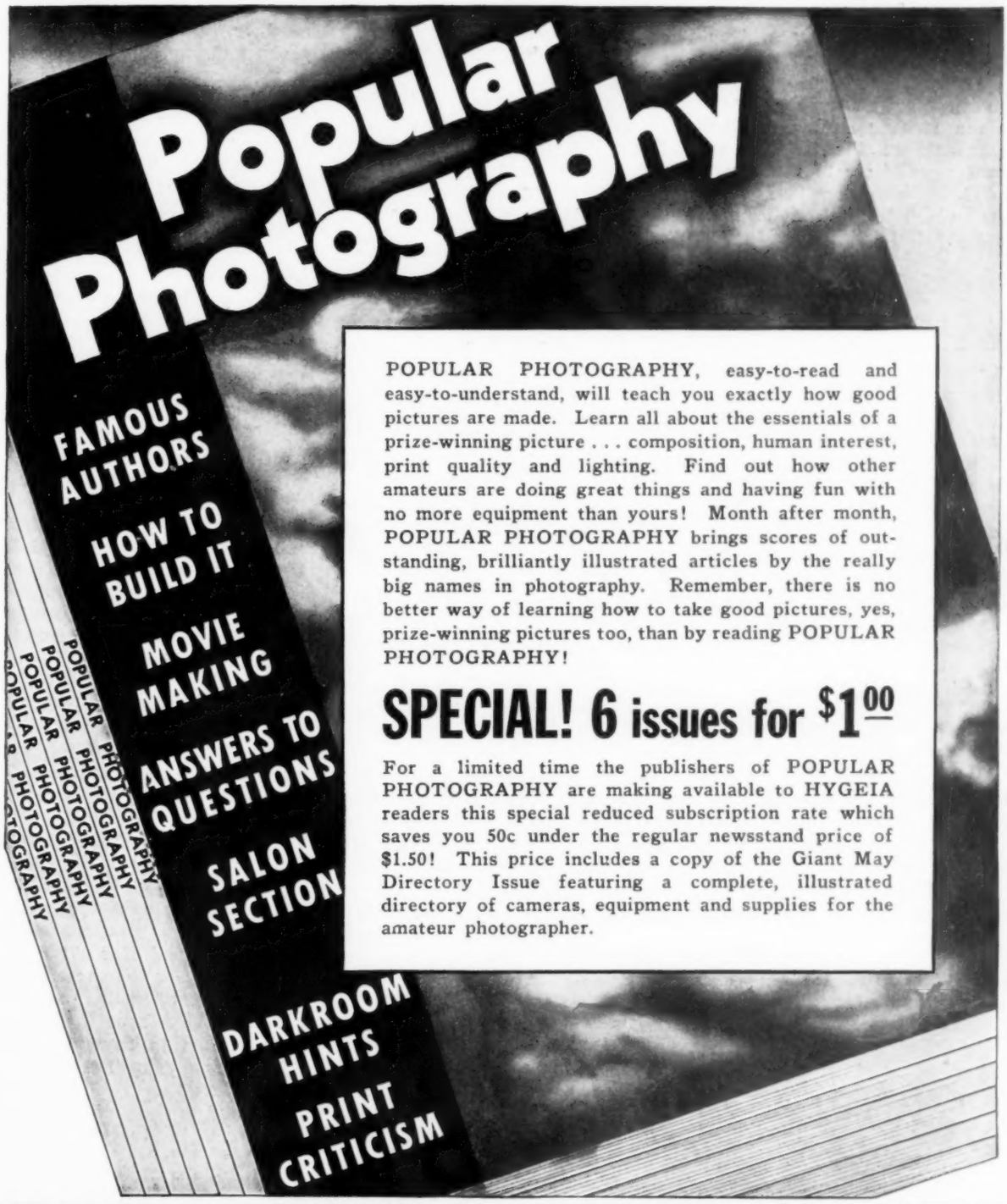

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DEADLY DISEASE NUMBER 2

(Continued from page 216)

by the members of the profession. Patients are no longer routinely purged and bled and subjected to stifling atmospheres or poultices. Highly important is the earlier and more intelligent use of oxygen. The demand for oxygen is increased by reason of the fever and because the oxygen must pass into the blood through a smaller surface of the lung sacs where the transfer of oxygen from the air to the blood occurs. The air sacs are filled with exudate which excludes the air. Accordingly it is necessary to increase the concentration of oxygen in the air sacs by reducing the percentage of nitrogen. Nitrogen is usually present to the extent of 79 per cent, and the percentage may be readily reduced by adding pure oxygen to the air breathed. Pure oxygen is conducted to the nostrils with an inhaler or mask, or the patient may be surrounded by oxygen enriched air in an enclosure or tent.

It is a matter of common observation that many pneumonias are preceded by a cold in the head or chest. Though this relationship has been known for generations, the explanation has been offered only recently. It was in 1931 that Shope, working in the department of animal pathology of the Rockefeller Institute for Medical Research, Princeton, N. J., established that swine influenza was due to the combined action of a filtrable virus [a germ so small as to pass through the finest porcelain filter] and the bacillus of influenza. The virus was the important agent in the spread of the disease and in the immunity which followed the infection. The bacteria apparently increased the severity of the infection brought about by the virus. Two years later, Smith, Andrewes and Laidlaw found the virus in influenza patients and were able to transmit the disease experimentally to ferrets. Shope had found that the virus alone produced a mild disease, that the influenza bacillus alone often produced no disease, but that the combination produced severe and often fatal pneumonias.

In epidemics of influenza it has not always been the influenza bacillus which has accompanied the virus but often streptococci and pneumococci. When patients recover from influenza, they are immune to the virus. Patients recover if the "partners in evil," the bacteria, are overcome either by the patient's own immunity, by injections of serum containing antibodies produced in animals or by drugs which diminish the virulence of the bacteria.

There are several interesting facts associated with these discoveries. The earliest virus studies of respiratory disease were undertaken in England on dog distemper. These experiments were based on preliminary studies prior to 1923 that had led to the inference that influenza was due to a virus. The work was done by Dunkin, a veterinarian, and Patrick P. Laidlaw, now Sir Patrick P. Laidlaw, with money raised in America by dog lovers through the magazine *Field* in conjunction with the British Medical Research Council. This research, which was conducted at their farm laboratories near London, established the transmission of distemper to ferrets and the importance of the viral element in securing immunity or freedom from susceptibility to another attack. Previously, attention had been focused on the bacterial element, and many researches had been fruitlessly undertaken. Shope's work was important to human medicine, because the swine influenza, or "hog flu," had been acquired from man during the great epidemic of influenza in 1918 and had persisted among the swine. Other workers have shown that there are a number of different viruses which produce influenza either with or without pneumonias and that the character of the pneumonia depends on the organisms which may be present or acquired during the infection.

Of the million and a half deaths in the United States during 1937, almost 150,000 were due to influenza and pneumonia. The death rate at different periods of life varies, and for each period some particular causes are most frequent. In infancy (under 1 year of age), there were 119,930 deaths from all causes, and over 20,286 or 16.9 per cent were due to influenza and pneumonia. In childhood (1 to 4 years of age), there were only 34,392 deaths; but 9,236 or 26.9 per cent of these were due to influenza and pneumonia, more than from any other single cause at this age. In youth (5 to 19 years of age), there were 58,519 deaths, 7,374 or 12.6 per cent of which were due to influenza and pneumonia, again the most frequent cause for this age group and one in which therapy is most successful. Among adults (20 to 59 years of age), there were 508,806 deaths; of these 52,493 or 10.3 per cent were due to influenza and pneumonia. In this age group, influenza and pneumonia are third on the list and are exceeded only by diseases of the heart, 18.7 per cent, and cancer, 11 per cent. In old age (60 years and over), there were 727,668 deaths, and the influenza and pneumonia deaths were 58,506 or 8 per cent, having become fifth on the list. One third of the deaths in this period are due to diseases of the heart. The next most frequent causes in order are cancer, 12 per cent, cerebral hemorrhage, 10.3 per cent, and nephritis, 9.8 per cent.

The importance of influenza and pneumonia as causes of death in the present century is revealed by a study of the line graph which shows deaths from all causes. Since 1900, there has been a steady decline in the death rate from 1,750 per hundred thousand to 1,125 in 1937, with one peak in 1918 and 1919 when the death rate was more than 1,800. This peak interrrupted the steady decline and brought the death rate back to a point which was common in the last century. It was due to the widespread epidemic of influenza which occurred then. This will be readily seen when we compare the graph for influenza and pneumonia deaths with the graph for all causes of death. One of the most important single causes for the reduction in all deaths has been the decline in the death rate from tuberculosis. This moderation has been more rapid than the decline from influenza and pneumonia. The great reduction in tuberculosis deaths which had been in progress was accelerated after 1918 due in part to the improved medical care, hospitalization and propaganda. Can similar causes operate in reducing the influenza and pneumonia deaths? The reduction in the death rate from influenza and pneumonia has been great, from 200 down to

(Continued on page 264)

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BOOKS ON HEALTH

Were We Guinea Pigs?

By the Class of 1938, University High School, the Ohio State University. Cloth. Price, $1.60. Pp. 303. New York: Henry Holt & Co., 1938.

This is a unique contribution. Fifty-five members of the graduating class of the University High School of the Ohio State University wrote this book instead of getting out the conventional yearbook. Their chief reason for doing this was that they were misunderstood. They had been criticized because they were "progressive." Their school had been attacked, because it was believed that they did not have the "fundamentals." They were optimistic enough to believe that they could help to clear up the thinking of people who did not really understand their school. "Our aim," runs the introduction, "has not been to make everyone in our class a brilliant scholar, but rather to fit each of us for the place in life for which he is most suited." The authors believe that this has been accomplished in most cases.

The twelve chapters in the book are devoted to the project of telling the story about the development of their progressive high school from the time they entered the high school. One of these chapters is on "Health and Sports." There is no regular hygiene course in the school, but every student is required to have two physical examinations each year and more if the doctor thinks it advisable. Those who have handicaps have special advice in regard to their physical examination program. Contacts are made with the homes. The school has an integrated health program. Problems of health are introduced naturally in the various courses, such as biology. Cleanliness and neat personal habits are stressed in physical education. Teachers seek to round each pupil's personality in every field. The physical education program provides opportunity for all students.

In their final evaluation of the results the youthful authors are confident that their training has helped them to think for themselves, to learn things from actual experiences rather than as mere spectators and to cooperate with others and live a balanced life.

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"Yours is an unusual and pitiful case, Mr. Bowen. You're allergic to yourself."

They finally conclude that, "Maybe we were guineau pigs, but we, our parents and our teachers are still glad we took the chance."

J. Mace Andress, Ph.D.

A Study of Jealousy as Differentiated from Envy

By T. M. Ankles. Cloth. Price, 82. Pp. 109. Boston: Bruce Humphries, Inc., 1939.

This is an American edition of a work previously published in England, originally presented in fulfilment of requirements for a postgraduate degree in psychology at the University of London. The author endeavors to explore the various mechanisms operative in jealousy, which he eventually defines as "a complex emotion (dynamic) with two aspects—Active and Passive—the factors wherein are determined by individual variations—, but the sum total always remaining constant." The author is at pains to distinguish between jealousy and envy, emphasizes the covetous nature of envy, where attributes or more material "things" may be desired with or without feelings of love or hatred toward the envied person and without assuming a right of possession. Jealousy always involves tender feelings for the person toward whom jealousy is directed. The emphasis is on the personal relationship, and "right of possession" is assumed.

The author's study is based on personal interviews with ten persons from business and professional circles, ten from academic circles and ten from business and working groups with lesser educational opportunities than the two previous classes. The subjects were directly questioned about the general topic of jealousy. In addition, ten university trained subjects answered a questionnaire, beginning with the question, "Give a definition of Jealousy that differentiates it from Envy." From interviews and responses to the questionnaire, the author subjects unconscious as well as conscious attitudes and feelings in relation to situations involving jealousy reactions. The ultimate purpose is to arrive at such understanding of jealousy as may lead to effective treatment for the "eradication" of jealousy.

This book, though quite small, manages to be most confusing and unconvincing. The author is equipped with various concepts derived from different psychologic schools, and he states that he adheres to no one school. "The perfect system of psychology lies in (the) unification" of the overlapping thought of the various schools. The lack of clarity in presentation, in part derived from the confused conceptual background, is seriously augmented by the stylistic peculiarities. These range from long, confused and at times ungrammatical sentences, to lapses into a sort of "outlining." The total effect is to bewilder the reader. A random example is as follows:

"We see here that the inhibiting of the full feeling of Jealousy from 'the loved one' gives rise to the transformed feeling—mostly of hate toward the third party—these 'exemptions,' it will be seen, vary (they may be partial or complete) —hence the confusion, in answering the question as to against whom 'the Jealousy' is directed, is seen to rise."

Such merit as Mr. Ankles' study may have could become apparent only with a thorough editing of his confusing presentation.

George J. Mohr, M.D.

Skiing

By Walter Prager. Cloth. Price, $1. Pp. 92. Illustrated. New York: A. S. Barnes & Co., 1939.

Walter Prager is coach of skiing at Dartmouth College and presents here an excellent practical manual covering not only the technic of skiing but such things as training, selection of skis, care of skis, equipment for skiing tours and the laying out of courses for slalom or other races.

The verbal description of any such thing as how to use skis, balance and poles in different evolutions, always emphasizes the limitations of language as compared with man-to-man demonstration. On the whole, the author overcomes this handicap well. Most of his instructions would be clear to a beginner and the diagrams and reproductions of photographs supplement the written word.

The book is a section of the Dartmouth Book of Winter Sports published separately now for the first time. It is a good work of its type and is timely when a new skier is born each minute of the winter.

Dudley B. Reed, M.D.

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Sitting Pretty

By Janet Lane. Paper. Price, 25 cents. Pp. 32. New York: John Wiley & Sons, Inc., 1939.

The author of the popular "Your Carriage, Madam" contributes this booklet as a guide to good posture for the office worker. Certainly it is needed, if one is to judge by the characteristic stoop of most persons who work in offices. Miss Lane assures us, however, that there are plenty of such workers "Who stay as thin as a rail and straight as an arrow all their lives." It isn't the amount of sitting but the kind of sitting that makes the trouble. Then in simple language and with the help of illustrations Miss Lane shows just how one is to get good posture. Not only office workers but teachers will want to read this excellent publication.

J. M. A.

Nutrition and Physical Fitness

By L. Jean Bogert, Ph.D. Cloth. Price, $3. Pp. 602. Philadelphia: W. B. Saunders Company, 1939.

The occasion may arise when information about foods or diet is desired, and the ordinary books do not afford any assistance. In such circumstances, it is likely that Dr. Bogert's book, now in its third edition, contains the information desired. A little more than half of this book is devoted to a discussion of foods and body requirements. The rest of the book concerns practical aspects of meal planning and diets for special conditions. The scientific discussions are accurate enough for the expert and understandable by any well educated person. The chapter on "Food Fads and Fancies" would well repay careful study in itself. It contains a table of common fallacies and true facts, side by side. If enlarged, this table would make a splendid chart for the classroom.

Franklin C. Bing, Ph.D.

Catarrh

By Adrian Vander, M.D. Cloth. Price, $1.50. Pp. 79. Illustrated. New York: Fireside Press.

To a medical man, it is difficult to follow or understand the theories propounded on the constitutional background of colds. At times the author gives one the impression that he understands some of the current opinions but again wanders off into his own personal theories that are vague and even fantastic. He makes no reference in the text to the illustrations of the book. To carry out the suggested methods of prophylaxis and therapy, one would have to be financially independent in order to abstain from activity. The outline of therapy, both general and medicinal, would necessitate a private nurse and an eighteenth century apothecary. His prescription of herbs reminds one of a witch's mixture.

This book has no scientific value for any reader.

Francis L. Lederer, M.D.

Skating

By Harold Putnam and Dwight Parkinson. Cloth. Price, $1. Pp. 115. Illustrated. New York: A. S. Barnes & Co., 1939.

This book is a section of the Dartmouth Book of Winter Sports written by two members of the Dartmouth skating team of 1937—and very well written. It is readable and, on the whole, extremely clear. Clearness is not easy to achieve in describing figure skating.

A brief history of skating is followed by consideration of training, equipment, speed skating, free skating and figure skating. And finally there is a chapter on the construction of an ice rink and the care of the ice surface. The section on figure skating is well done in that it is limited to essentials which are clearly explained by text, diagram and drawing. The book is practical and might well be in every athletic and physical education library as well as on the shelves of persons especially interested in this unsurpassed sport.

D. B. R.

Teaching Wholesome Living in the Elementary School

By Alma A. Dobbs. Price, $2.50. Pp. 304. New York: A. S. Barnes & Co., 1939.

This book is an application to health education of the totality concept of the child. It emphasizes health education as an attitude rather than a curriculum unit or merely a "course." Learning situations are derived from the life of the child in school and out. Health is interpreted in such everyday activities as washing, eating, working, playing, thinking, choosing. The author insists on the importance of giving the child protection from

adverse influences in his growth toward his objective. She defines happiness as the sense of growing toward a desired objective. As do all the Progressives in education, she lays stress on self expression; but she does not fail, as do so many of like persuasion, to recognize the value of self control, which renders this book, in the eyes of this reviewer at least, among the best which have come out of the Progressive movement.

The book is divided into three main parts, a supplement and an appendix. Part One takes up the philosophy of health education as briefly outlined. Part Two deals with the curriculum. This matter is handled in an interesting and constructive manner. Beginning alphabetically with "asking" and proceeding through "bathing," "breathing" to "washing," "working" and "writing," she deals with the various activities, giving information, methods by which the children can be introduced to the activities and interested in them and suggestions to the teacher for stories and devices.

An amusing but harmless inconsistency is her suggestion for simple dramas, though in the introduction she has been somewhat scornful of this time-honored device for presenting ideas to children—at all ages. The appendix deals with alcohol and narcotics; alcohol would have preceded asking in the alphabet, if it had not been wisely banished to the appendix. Health knowledge tests, and some material on sex education—inadequate by comparison with other matters presented—complete the appendix. The supplement is a presentation, at once noble and visionary, of the results visualized from education based on the concept of wholeness.

W. W. Bauer, M.D.

The Dartmouth Book of Winter Sports

Edited by Harold Putnam. Illustrated. Price, 83. Pp. 315. New York: A. S. Barnes & Co., 1939.

This book contains the advice and experience of members of the Dartmouth Outing Club and is written for persons interested in skiing, skating, the Dartmouth Winter Carnival and winter mountaineering and camping. It is well edited and put together, illustrated with excellent photographs and with diagrams to explain the technics described in the text.

However, the section on food for training purposes mentions the experimental study recently conducted on gelatin in relation to its energy production. It should be emphasized that the Council on Foods of the American Medical Association has found that there is no scientific basis for any claim that gelatin as such will impart a great amount of energy.

Sibyl Winser Johnston.

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DEADLY DISEASE NUMBER 2 (Continued from page 256)

100 per hundred thousand. In observing the course of events as revealed in the graph for this disease, one may note that there has been a reduction in the death rate since the great epidemic; peaks came at intervals of three years, when influenza was epidemic. But the high peaks have not been present since 1930. There was a slight elevation in 1936 which continued in 1937, but this has since declined.

It is important to explain this change in the character of the curve; this reduction may be related to improved medical care and a change in the point of view concerning these diseases. Interest in the study of the pneumonias has been high since the beginning of the century. The disease is so important that ever since the Rockefeller Institute Hospital has been opened it has been a major subject for investigation there. The value of specific serum in the treatment of one type of pneumonia was established there by Rufus Cole and his associates. The practice of serum therapy did not spread from this center because of the severe reactions and the expense and difficulty of administering serum. In the middle of the third decade of this century, Felton proposed a new refinement of serum, combining salt precipitation and dilution with distilled water. At this time, the late Dr. William Hallock Park, director of the research laboratories of the New York City Department of Health, commenced to study the effect of serum refined and concentrated by Felton's method in four centers, and manufacturers were induced to inoculate horses and to refine serum. Park and his co-workers, at several centers, tested out and demonstrated the feasibility of administering serum to a large number of patients, and the method was introduced into practice in New York City and Boston. As the result of this work, The Commonwealth Fund supported a five-year demonstration in Massachusetts. The number of types for which serum could be had was increased, and later rabbits were used as a source for serum.

For those who must, in the nature of our social life, live with the ever present hazard of meeting virus and bacteria in carriers or patients suffering from influenzas and pneumonias before they take to bed, a practical measure for avoiding infection is to maintain their bodies in the best possible nutrition and avoid such influences as lowered resistance, exposure, fatigue, hunger and alcoholic excess. If we do become infected with a common cold or grippe, we should avoid contacts with other cases by avoiding crowds, thus escaping possible carriers of virulent pneumococci or streptococci, and we should place the body in the best possible condition to meet the infection by a simple precaution, "rest in bed."

LEAD POISONING FROM TOY DISHES

A warning of the dangers that may accompany the use of toy dishes is contained in the report of a case of acute lead poisoning attributed to such toys by Thomas K. Rathmell and Frederick L. Smith II, Norristown, Pa., in *The Journal* of the American Medical Association.

Their patient, a child of 22 months, became ill after eating and drinking from supposedly aluminum toy dishes. Analysis of some orange juice from the toy teapot and an unused toy cup showed an appreciable amount of lead. The acids of the orange juice, the authors say, extracted the lead from the dishes.

"It was determined that the toy dishes were manufactured in the United States, but absence of other labels prevented further identification," the authors state. "Fortunately no serious effects have resulted to date from the acute poisoning. However, as long as there are no statutes to prevent the use of lead compositions in the manufacture of children's toys and reputable department stores will offer such goods for sale, it is essential for physicians to recognize the harmful potentialities of toy dishes and to appreciate acute lead poisoning as one of the factors in the acute abdominal conditions of children."

QUESTIONS AND *Answers*

Hammer Toe

To the Editor:—Can hammer toe be remedied?

N. M., New York.

Answer.—Hammer toe is one of the more common disabling deformities involving the smaller toes. It is due in many cases to abnormal development of the joint in infancy. In others, it is directly due to crowding of the toes by pointed, short shoes. The structures about the joint itself become deformed and the capsule contracted, subjecting the joint to unusual irritation from pressure. Corns over the back of the toes are frequently distressing. Calluses under the metatarsal joints of the toes involved are highly disabling. Stretching and various movements are frequently employed, but the results are unsatisfactory.

If the hammer toe results in real disability, it should be treated surgically by operation on the joint. Removal of the toe is rarely necessary.

Night Terrors in Children

To the Editor:—What causes nightmare? Our 4 year old boy has had them ever since his tonsils were removed several months ago. They appear to be typical night terrors, and he has no recollection of them the next morning. What can we do?

E. D., Illinois.

Answer.—Many cases of night terror are traceable to physical discomfort, such as thirst, obstructive breathing, overloaded stomach or faulty posture during sleep. These may be corrected by attention to the general health of the child and a sensible regimen of hygiene. Others have their origin in emotional disturbances.

It is conceivable that in an impressionable child the necessary unpleasantness incident to the removal of the tonsils, such as the administration of an anesthetic and the strange environment, may make their appearance in the form of night terrors for some time following the operation. Such cases improve, as a rule, soon after the child learns to relate the contents of his dream. To do this he should be awakened thoroughly, but calmly, and be encouraged to talk freely about his fears at the time they occur. If one can get to the bottom of a fear, it is no longer disturbing. Children can remember their dreams if they make an effort to do so. They do not usually describe them because of fear of ridicule. To help a child, therefore, one must gain his confidence so that he can describe his dreams and tell what is going on in his mind. In discussing his fears, he will learn which ones are groundless and those that are legitimate. Many wrong ideas will probably be expressed, which can be corrected. He can be taught that dreams are thoughts which go through the mind at night; that they are not true; that we all have them, and we should not be frightened by them.

It is probable that the entire personality of the child requires attention. For this reason, any underlying physical condition that tends to increase restlessness should be corrected. The shock of the tonsillectomy is probably responsible for his present emotional excitement, but there is, in addition, an undercurrent of sensitivity to be protected. Efforts should be made to build up his general confidence in himself and to increase his sense of security. If he manifests fears during waking hours, they should be allayed.

Simple psychotherapy is often helpful. The repeated suggestion may be made to the child just after he has fallen into an early light sleep that he will sleep quietly all night. Such suggestions should be repeated in the same words several times each night for several weeks, if necessary, in a firm but quiet tone before the child falls into a deep sleep. While this type of suggestion may be exceedingly helpful, some children respond more directly to a suggestion that they have a substituted dream of more welcome type. This requires active cooperation of the child. He is asked, for example, what he would like to dream about and stimulated to suggest something pleasant which then should be accepted as a proper dream goal. The child is encouraged to repeat each night, after he is in bed, the light out and his eyes closed, a formula including his selected dream content, such as "Tonight I will dream of playing ball." The dream suggestion should be repeated until the dream is reported. Frequently the self-selected dream material assumes dominance within a couple of weeks and is substituted for the unpleasant dream material reflected in the night terrors.

Hammer toe is often due to crowding of the toes by short pointed shoes. If it causes real disability, it may have to be corrected surgically.

Bleaching Superfluous Hair

To the Editor:—I am a decided brunette. Since coming out to Congo in the fall of 1937, I have noticed a seemingly heavier growth of hair on my arms and legs. Shaving is not satisfactory, but I think it would help if I could get a hair bleach so they would not be so noticeable.

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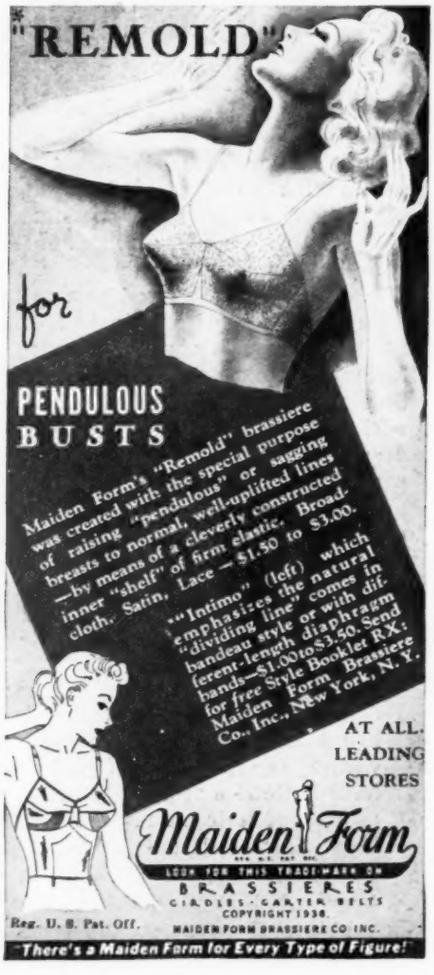

Could you suggest something that will really help?

G. T., Africa.

Answer.—You are correct in assuming that bleaching the hair would be the most suitable method of dealing with your problem. There is no satisfactory and safe way to remove hair over large areas permanently, and the temporary methods, such as shaving and the use of depilatories, are likewise unsatisfactory. One of the safest and best methods for bleaching the hair is to moisten it with weak ammonia water by brushing over it lightly with absorbent cotton soaked with the fluid; then, before drying takes place, moisten it similarly with fresh hydrogen peroxide solution and allow it to dry. An effort should be made to get as little as possible of the material on the skin itself. Ten or fifteen minutes after the solutions have dried, the parts may be rinsed with clear water. This process repeated at suitable intervals is perfectly harmless and often makes dark hair quite inconspicuous.

Sleeping Fitfully

To the Editor:—My son is 2½ years old, and until just recently he would go to bed quietly and sleep through the night. One day, his nurse went on vacation; during her absence he behaved well. On her return, however, his behavior changed. When being put to bed he will ask whether Mary will stay home and go to sleep. He then says good-night and is quiet. But every evening he has awakened at least once, sometimes three or four times, crying bitterly. When told that Mary is in and will go to bed soon, he quiets down and goes to sleep. Last night he awoke crying at 9:30, and I quieted him. He awoke again at 10:30 and was awake until 12:30, calling out to me through the closed door every so often, "Is Mary coming to sleep?"

It is very likely that he was frightened one night. His room, which is in the rear, faces on an open space in which groups of people have been known to congregate and start a commotion. He was awakened by such an incident the Friday night before Mary's return; but the following night, when he was still alone, he slept well. Mary returned Sunday night, and on Monday evening he started his crying spells.

What shall we do?

L. E. W., New York.

Answer.—The fright element in this case may be of minor importance. Children at this age can of course be frightened by sudden commotion. As a rule, however, the auditory shock alone would not be likely to last for more than a few minutes or at most a few hours. Then, too, sleep would be restless with or without the nurse at his side.

Night terrors are prevalent at this age, and they can be cured. The first prerequisite is a careful physical examination by a competent physician with particular reference to dietary and other hygienic factors. The child's emotional reactions, his daily program, his habits and the like all demand thorough study. At times a mild sedative may be temporarily necessary in order to produce deeper sleep. It is well known that night terrors occur in light sleepers only.

There is one other phase to this problem which cannot be ignored. This child may be indulging in a procedure that is quite common in early life: the refusal to go to sleep. In an effort to evade the bedtime hour many youngsters will resort to innumerable questions and demands; usually their nature betrays stalling. They may be questions that indicate a normal sense of curiosity but are expressed at the wrong time of the day—anything to delay going to bed. We have all seen these maneuvers.

I wonder if this 2½ year old youngster is not just specializing in, "Is Mary coming to bed?" and "When is Mary coming to sleep?" He is not yet old enough to ask the thousand and one questions so universally heard from the lips of every normal child.

Skin Eruption

To the Editor:—What is lichen planus? Is it contagious? How does one get it? Can it be cured?

A. K., New Jersey.

Answer.—Lichen planus is a severely itching skin eruption which occurs for the most part on the back of the trunk and extremities and on the mucous mem-

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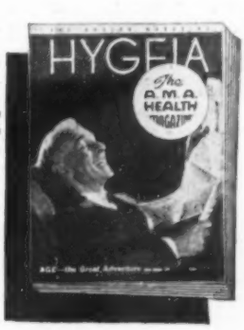

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brane of the mouth and the lips and in the genital region. The individual lesions are small, flat, shiny, slightly angular papules. Any scale is usually adherent. No pus or serum comes from the lesions. Under a magnifying glass the tops of some of the papules are seen to have delicate markings or stripes on them. Once the lesions are well developed, they are some shade of violet in color.

The cause of lichen planus is not known. It is considered by many to be of infectious origin, although it is not transmissible to others. It occurs chiefly in individuals of so-called nervous temperament and commonly in those who work under considerable tension and nervous strain. Not uncommonly it follows a severe shock of one sort or another. Left to itself it tends to persist more or less indefinitely, but it can be cleared up in most instances by appropriate treatment. In an occasional case it may be necessary to use a small amount of x-ray treatment on the worst areas. Any local preparations that might be employed, such as salves and lotions, give the patient some relief from itching.

Heredity and Disease

To the Editor:—I have been long concerned with the subject of heredity of diseases. My belief is that if either the father or mother are diseased, the chances of their child being born healthy is one to six. This proves my point of heredity of disease.

Another says that no matter who is diseased, the child is born immune from all diseases but that he has a tendency toward certain ones. Now, technically, this is heredity. However, should the child be taken away from his diseased parents and given the proper care (that is, by another family) he would survive the tendency and be healthy.

S. L., New York.

Answer.—The term "disease" is a general one signifying derangement or failure of physiologic function. Since such disorders may arise from any one or more of many possible causes—from a blow on the head to infection by bacteria—it is clearly impossible to talk understandingly of their inheritance until it is known which disease is in question. Reappearance of a disease in successive generations does not necessarily signify inheritance. It may be merely reappearance of the malady as a result of similar surroundings. This is particularly true of infections. Children of lepers, for example, do not inherit leprosy, and if kept away from lepers, they remain normal. Again, prenatal infection is not inheritance. An unborn child may take smallpox from its mother, and a syphilitic mother not infrequently transmits the unicellular parasite of this disease to her unborn young; but all such cases are instances of early acquirement, not of inheritance. They are not represented by determining factors in the germ cells.

Many disorders, however, such as certain forms of insanity, probably a considerable proportion of epilepsy and feeblemindedness and such anomalies as color blindness, deaf-mutism, cataract and various malformations, have important hereditary aspects. Where heredity is involved in infective diseases, the condition is one of inheriting a special susceptibility or lack of resistance, and not the disease itself.

When serious illness of the mother reacts unfavorably on her unborn child, the damage almost invariably results from persistent maternal nutritional disturbance or from toxins or other harmful agents present in her blood stream. A child born of such a mother is constitutionally handicapped not because of heredity but because of an unwholesome prenatal environment.

Calcium Tablets for the Teeth

To the Editor:—Does the use of calcium tablets have any value for the teeth?

L. L. J., West Virginia.

Answer.—Calcium and phosphorus are both essential elements in the diet. They are of primary importance in the growth of the teeth and the bones. There is no carefully controlled evidence to show that the addition of calcium tablets to a diet adequate in calcium is of any value in the prevention or treatment of dental diseases. The available evidence indicates that a diet adequate in calcium and phosphorus may be had without the addition of calcium tablets. It should be remembered that milk serves as an excellent source of calcium and phosphorus.

Nose Drops

To the Editor:—Is it likely that nose drops used in treating a cold would act as a means of spreading the infection to the ears?

R. D., Illinois.

Answer.—Nose drops could, in some cases, during an acute head cold, produce infection in the middle ears. If the solution used is watery, it could dilute the nasal secretions and be blown into the eustachian tube by improper and forceful nose blowing. Even coughing might force the secretion into the tube, though this is rare.

Oily solutions are said to interfere with the action of the hairs of the nose, and during an acute head cold they are likely to irritate the inflamed mucous membrane.

It should be remembered that hydrocarbon oils instilled into the nose have been known to produce lipoid pneumonia. It is well to confine nasal medication to watery solutions, and to use them in the form of drops or spray. If drops are the method of choice, they should be instilled into each nostril with the head so placed that the chin will point to the ceiling, holding posture for several minutes.

Whether drops or spray be used, the important rule should be remembered and carried out: *Never blow the nose forcibly, only gently; keep one or both nostrils open when blowing the nose, and never pinch the nose during the blast.*

Many nose and throat physicians believe that nasal medication should not be used at home, except on the direct advice of the physician when the acute condition has subsided. Proper use as just outlined may be helpful. There are a number of individual factors and variations, but this procedure is a safe guide in the prevention of ear infection.

Children's Winter Clothing

To the Editor:—Many mothers send their youngsters to school all winter with short socks and bare knees. Could you give me some information on the dangers of undue exposure to children?

G. H., Ohio.

Answer.—One good general rule in regard to children's clothing is that the clothing should be comfortable, both as to fit and as to warmth or coolness according to the season. The amount of cloth-

ing required for comfort in cold weather is widely variable with different children. For comfortable sleeping at night some children demand twice as much bed covering as others, even when the children are of the same family. The same difference is found in outdoor life in winter. The difference depends in part on the robustness of the child and the thickness of the layer of fat under the skin and in part on habit.

It has been demonstrated that children in camps for convalescents may wear no clothing other than loin cloths all summer and are able to continue in comfort in this condition in the fall far longer than children who have worn more clothing throughout the summer. It is well known that many children in the temperate zone go bare-kneed all winter without associated illness and with apparent comfort. It is known also that many children are uncomfortable with this amount of exposure and are not benefited by attempted "hardening," though possibly no essential harm is done by exposure of the knees, especially if the body is otherwise kept warm. It must frequently happen that the chilliness resulting from bare knees and legs, even though not harmful, prevents relaxation and enjoyment of brisk weather to which sufficiently warm clothing contributes.

Graying of Hair

To the Editor:—My grandfather who is 74 years of age would like to know why his mustache and his hair are snow white and his eyebrows are dark. Why doesn't the hair in his eyebrows turn white?

L. F., New York.

Answer.—Your question, while an interesting one, is impossible to answer with accuracy in the light of our present knowledge of the physiology of the hair. While a great deal is known about the development and anatomy of the hair, relatively little has been definitely worked out on a scientific basis concerning its color distribution.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

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In front of the table, on the left center, from left to right: 1. Sister St. Joan of Arc, R.H., St. Bernard's Hospital, Chicago; 2. Sister St. James, R.H., Hotel Dieu Hospital, Kingston, Ont., Canada; 3. Sister Mary Sunderland, R.H., St. Bernard's Hospital; 4. The Rev. Joseph S. O'Connell, third vice-president, Catholic Hospital Association, New York City; 5. Mr. Edgar C. Blake Jr., trustee, American Protestant Hospital Association, Methodist Hospital, Gary, Ind.; 6. Mr. M. R. Kneifl, executive secretary, Catholic Hospital Association.

On the right center, from left to right: 7. Sister Sullivan, R.H., counsellor, St. Bernard's Hospital; 8. Sister M. McGrath, R.H., St. George's Hospital, Chicago; 9. The Rev. John W. Barrett, second vice-president, Catholic Hospital Association, Chicago; 10. The Rev. O. B. Maphis, trustee, American Protestant Hospital Association, Bethany Hospital, Chicago; 11. Mr. Frank J. Walter, trustee, American Hospital Association, St. Luke's Hospital, Denver; 12. Sister Mary Loughlin, St. Bernard's Hospital, and 13. Dr. Henry M. Pollock, trustee, American Hospital Association, Massachusetts Memorial Hospital, Boston.

In the back, from left to right: 14. Dr. Christopher G. Parnall, trustee, American Hospital Association, Rochester General Hospital, Rochester, N. Y.; 15. Sister M. Immaculate, R.H., Counsellor, St. Bernard's Hospital; 16. Dr. Austin A. Hayden, Treasurer, American Medical Association; 17. Mother Mary Kelly, R. H., Superintendent, St. George's Hospital, Chicago; 18. Dr. Morris Fishbein, Editor, *The Journal* of the American Medical Association; 19. Sister M. Patricia, board member, Catholic Hospital Association, St. Joseph's School, St. Thomas, Ont., Canada; 20. Mother M. Irene, treasurer, Catholic Hospital Association, St. Mary's Hospital, St. Louis; 21. The Very Rev. Monsignor John R. Mulroy, second vice-president, American Hospital Association, Denver; 22. Mr. Asa S. Bacon, trustee, American Protestant Hospital Association, Presbyterian Hospital, Chicago; 23. Dr. Olin West, Secretary and General Manager, American Medical Association; 24. Rev. Mother M. Concordia, St. Mary's Hospital, St. Louis; 25. Dr. Fred G. Carter, president, American Hospital Association, St. Luke's Hospital, Cleveland; 26. Rev. Mother Cecilia Murray, R.H., St. Bernard's Hospital; 27. The Rev. Alphonse M. Schwitalla, S.J., president, Catholic Hospital Association; 28. Mr. Albert G. Hahn, executive secretary, American Protestant Hospital Association, Deaconess Hospital, Evansville, Ind.; 29. Mrs. Albert G. Hahn; 30. Dr. Malcolm T. MacEachern, associate director, American College of Surgeons, Chicago; 31. Miss Ada Belle McCleery, trustee, American Hospital Association, Evanston Hospital, Evanston, Ill.; 32. The Right Rev. Monsignor Maurice F. Griffin, first vice-president, Catholic Hospital Association, Cleveland; 33. Sister Helen Jarrell, R.H., St. Bernard's Hospital; 34. Sister Mary Angela, board member, Catholic Hospital Association, St. Joseph's Hospital, Lexington, Ky.; 35. Dr. William D. Cutter, Secretary, Council on Medical Education and Hospitals of the American Medical Association; 36. Sister M. Brendan, St. Joseph's Hospital, Lexington, Ky.; 37. Dr. Bert W. Caldwell, executive secretary, American Hospital Association, Chicago, and 38. Dr. Claude W. Munger, past president, American Hospital Association, St. Luke's Hospital, New York City.

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(Continued from page 205)

fortable and able to see almost all the inside of the stomach, Schindler was offered a professorship at the University of Chiago and introduced gastroscopy in this country. Today some 300 of his pupils are practicing the technic, many of them as specialists in gastroscopy, associated either with leading hospitals or established clinics. Since gastroscopy is a highly technical specialty, it will probably never become routine procedure for the general practitioner.

Taking x-ray pictures of the stomach is still enormously important, and the flexible gastroscope has not supplanted it. Indeed the two are collaborators, some physicians recommend that every one, especially persons over 40, have both an x-ray and a gastroscopic examination when the stomach begins to behave abnormally. But even the x-ray overlooks certain lesions. They may be too remote, or food particles may have filled a crater so that barium, the x-ray contrast medium, cannot reach them. The gastroscope can detect tumors early and—most important of all—sometimes determine whether they are benign or malignant, harmless or virulent, operable or too extensive for surgery. And only the flexible tube can make a positive diagnosis of that commonest of stomach diseases, inflammation of the stomach lining—gastritis.

X-ray plates of an elderly man showed a large ulcer. Surgery seemed the only hope, but the patient was a poor risk. The gastroscope, however, showed the ulcer to be smooth and sharp-edged—in other words, benign. With diet and rest, it healed.

A woman in her forties was convalescing nicely after an operation for the removal of ulcers. Presently the symptoms recurred. Had the ulcers grown in again, as sometimes happens? Must she undergo a second and perhaps fatal operation? Gastroscopy dispelled this threat by showing that her stomach was only inflamed, a condition that may occur after an operation.

A girl who was recently married displayed all the symptoms of acute gastritis: pain, nausea, loss of weight and appetite. But in this

(Continued on page 276)

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Harold M. Lambert

COLDS
in Infants and Children

By WILLIAM I. FISHBEIN, M.D.

IN most climates, colds are so widespread that an infant who completes his first year without having contracted a respiratory infection is a phenomenon. Nevertheless, proper care may do much to keep colds from developing and at least decrease their hazards.

Almost every one is susceptible to colds, but there is a great variation in the degree. There are children who may go for years without a cold; yet, there are others who have two, three or more colds every year. The frequency of colds in different persons is as great as the difference in the various explanations to account for them.

Some parents are convinced that their children develop colds because they get their feet wet, because they sit in a draft or fail to dry their hair sufficiently after shampooing. Others are equally certain that colds develop because the children remain in too hot rooms, or because they wear too much clothing outdoors. There are cold-air fiends and hot-air fiends, although overheating is probably more often responsible for increased susceptibility to colds than is chilling.

The infant or child who seldom catches cold when there are persons all about him with these infections, who even may be coughing and sneezing in his face, is unusual. Colds are spread by germs. Children who rarely have a cold until they enter school often succumb to contact with the first sniff of a playmate. Arctic explorers suffer intense privations without catching cold but develop one as soon as they reach civilization. Both these facts indicate the place of germs as the cause for colds. Experiments seem to demonstrate that a filtrable virus is the responsible agent.

Colds are probably involved in more illness among children than any other disease. If everything goes well, in from three to four days the worst symptoms of a cold are over, although a cough or running nose may persist for a week or so. Unless complications develop, the child soon is able to return to his usual activities.

On the other hand, instead of getting well, a cold may progress and spread from the nose and throat to the ears or into the lungs, producing middle ear infection in the one case and bronchitis or pneumonia in the other. The germs may spread into the sinuses in older children and cause a great deal of trouble.

The germs producing colds may be spread from one person to another through kissing, sneezing, coughing or even talking. Furthermore, it is probable that colds are most infectious during the first day or two, when the symptoms are just developing. The father, returning from the office, may forget about the mild symptoms which indicate an oncoming cold and kiss the children, play with them a while and the next day discover that he has a severe respiratory infection. A day or two later, one or more of the children come down with colds, and in the meantime they, too, have spread the disease among their playmates.

It is possible also that articles such as handkerchiefs, pencils, glasses or dishes may be contaminated with the germs causing colds and aid in spreading infection.

When the baby has a cold, there is usually a thin discharge from the nose for a time, which later may become thick and yellow. At varying intervals, the lining membrane of the nose may become swollen and dry so that the infant has great difficulty in breathing. The baby is usually cross and fretful and may waken many times at night. A baby with a cold is more apt to have fever than is an adult. The secretions running from the nose into the throat may cause a great deal of coughing, because the infant is unable to get rid of these discharges by expectorating them. The cough often continues for several weeks.

One of the common complications of a cold in babies is diarrhea,

which may be due to involvement of the bowel by the same germs which are causing the cold. If the baby is kept out of contact with persons who have colds, the chances that the infant may avoid the disorder are increased. This is easier to say than it is to do. The older child with a cold often is found hanging over the baby's crib. While the mother may make every effort to protect her infant from contact with those who have infections, she may turn her back for a moment—and the damage is done! The infant may be much sicker with a cold than the older child from whom he contracted it.

Extremes in temperature, indoors and outdoors, should be avoided for the infant and child, as well as for the adult, in order to aid in the prevention of colds. Overheating causes drying of the mucous membrane of the nose and throat, increasing the ease with which germs may invade it. Chilling may produce congestion in the nose and thus also make it easier for infection to take place.

While many statements have been made concerning the process of "hardening" by exposure of the skin to cold as a means of preventing respiratory infections, there is no scientific evidence to prove or indicate that such a procedure is of value. Furthermore, during the "hardening" a severe infection may develop.

Removal of the tonsils will not prevent colds. However, since tonsillitis may occur during a cold and cause more trouble than the cold itself, removal of the tonsils which are easily infected will prevent this complication and may make the course of subsequent colds much milder.

An infant with a cold should be under the care of a physician. The baby with such an infection belongs in bed at complete rest. There is no apparent reason why the usual diet should not be continued, and the baby should be offered an abundance of fluids, such as water and orange juice. Many physicians advise the use of slightly sweetened weak tea. No medication should be employed unless prescribed by the physician.

There is no one remedy for colds, but there are measures which may serve to give relief from the discomfort which they so often produce.

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The MENTAL HEALTH of the CHILD

By S. BERNARD WORTIS

THE best insurance for the mental health of the child is a combination of physical health and a happy home. The training period of childhood is so important, because it is during this early age that the patterns of satisfaction and achievement are laid down. Successful child training works toward making the child (1) healthy, (2) happy and (3) self dependent. Let us focus our attention on how the child can learn to be happy. This requires for every child a combination of the knowledge that he is loved by his parents and feels secure with them, together with the satisfaction that comes from opportunities for successful achievement. It may be of interest to see how security, the lack of security or the presence of too much security influences the development of the child's personality and happiness.

How can the child be given a real sense of security? The safe harbor that makes it possible to weather all manner of emotional storm is about the most important safeguard for each of us. The presence of a sense of security depends entirely on the parents. The child must be made to feel safe, secure and welcome in his home; he must feel he is surrounded by sympathetic friends; he must be encouraged; he must be given his fair share of affection, and above all, he must be treated as a human being with certain rights and definite responsibilities. It must be obvious that parental authority, to be respected, must be respectable.

Parental indifference or neglect is soon reflected in the rebellious attitude of the child. He clamors for his fair share of attention by crying, shouting, having temper tantrums or by wetting or soiling his clothing when he was formerly well adjusted in personal habits.

This was well illustrated by little Mary, aged 5, who was brought to the hospital because she was having vomiting spells. It appeared that her father was seldom, if ever, at home, and her mother paid very little attention to her. The cause of Mary's vomiting spells was best described in the mother's own words, "Doctor, there's nothing good in the child. She's the most obstinate child in the world. She's made a nervous wreck of me. Oh, what time is it, doctor? I ain't got much time. I promised a friend of mine to meet her at the movies." You see little Mary felt this indifference and neglect and found that vomiting was an effective means of

Self dependence is learned by experience.

getting some attention from her mother.

Some children are made to feel insecure in their homes by neglect produced by other reasons. I remember Alice, aged 2, the fifth of a family of girls, who was brought to the doctor because she had temper tantrums. It hardly required any questioning to show that she was an unwanted child. Her parents were anxious for a son, and when Alice arrived they were disappointed, and their hostility and rejection of the child was obvious. Alice, wanting more love and affection, soon discovered that she was less likely to be neglected when she "made a fuss." Her parents were amazed to find that she became a gentle, reasonable human being when she was treated reasonably. Such reactions in children, properly managed early, prevent more serious trouble in later life.

Overambitious parents who expect too much of their children are an unsuspected cause of feelings of insecurity. Parents often push too many opportunities at the child. They forget that the child must not be driven too hard. Some parents make their children feel they are failures in school unless they lead their whole class in studies. Such an attitude on the part of the parent leaves the child little opportunity for satisfaction. The odds are too great. The child is made to feel that he is a failure, and so he may actually fail, merely because he has been impressed with the idea that there are only two possibilities: He must be the best or a failure. Children are known to develop night terrors because they worry about not being able to meet their parents' expectations successfully. If such competitive tension is maintained too long, the string of joy or even reason may snap. Consider the point of view of such a driven child, fearful that he will not be loved or cherished by an overambitious parent. Such children become happy and prosper when their tasks are adjusted to their abilities. Thus, by success, children recover the habit of happiness.

The feeling of security is never fostered in the child who is loaded with excessive responsibilities. Often such overladen children run away from home for relief from this unfair burden.

There are many other examples of insufficient protection that produce insecurity in the child. We must not forget that children are extremely impressionable and that family financial worries, family illnesses, arguments and superstitions are best aired, if necessary, when children are not about. Simple misunderstandings between husband and wife may easily be magnified by the child, make him unhappy and cause illness or misbehavior,

such as night terrors, vomiting, diarrhea or bed wetting. Parents should remember that the child's world centers about the parents, and anything that makes for disharmony or insecurity in the home makes the child's universe shake and crumble. Little Jimmy needs his world moderately safe and stable to feel safe and secure himself.

Emphasis on real or anticipated shortcomings arouse fear and confusion in the child. Instead, there must be encouragement and approval of successful ventures. Continual fault finding, parental overambitions and nagging make the child uncertain of himself. Too often the infant is "lectured to" or "reasoned with" in terms which he does not and cannot comprehend and then is reprimanded for disobedience, if the sermon has no effect. "Brow-beating," bogey-man threats and the custom of locking in a dark closet "for punishment" may introduce strong disturbing and persistent fears. Under such circumstances, a child can never develop a strong sense of security.

In direct contrast to the child who is unhappy because he feels insecure, we have the child who is overprotected, who is kept a baby for too long. Here one finds parents who don't expect enough of their children. You have all seen little Harold aged about 7, unhappy, meticulously dressed in his white starched collar, shy, unable to lace his shoes or button his coat; he never fights for his rights—he's never had to. You see him in the park with his nurse or governess, who, like his parents, will not permit him to sit on the grass or even play ball for fear he may soil his hands. Poor child! But this is not his fault by any means! The fault lies with the parent who prefers a clean, intact shop-window model to a healthy, normally aggressive child.

An environment that is all padded to prevent every smallest vibration is just as harmful as a home full of heated arguments. The child who all his life has heard only the "honeyed word" is not prepared to assert himself. A young man aged 24 came to the hospital clinic one day complaining of an addiction to alcohol. He found that drink made him feel happy because under its effects he found it easier to assert himself. Subsequently they unraveled his most interesting history. He was an only child, who was overprotected and given excessive amounts of affection by loving parents. As an infant he was not permitted to do things for himself. He was fed, dressed and had his books carried to school for him. He was helped too much with his lessons, although despite this help, he was a poor student. Because his parents were afraid he might fall and hurt himself, he was never allowed to climb fences or trees, never learned to skate or swim, and he never heard a harsh word. As a result, this boy became shy, he made no friends or, if he did, was not able to keep them. His interests, imaginations and desires were blunted, and later alcoholic intoxication became his only outlet to produce self assertiveness that gave him pleasure. Little did his parents realize that they were sowing the seeds for future unhappiness in their boy, because they were afraid to take small chances. This is a typical example of mental stunting caused by overprotection.

Allowing and encouraging the child to become self dependent requires much courage on the part of the parents. Little Michael will never learn to climb a tree, if his parents are not willing to take the risk of his falling and bumping himself. In later life he will never be self reliant if the habit is not started in early childhood.

The old adage, "No fights, no rights," is all too true. The child raised in a home where all was peace never develops abilities to assert himself. As a result, in later life he is often denied his just rights in the outside competitive world.

Too much security and excessive affection may arise from several roots. The child may be an only child. The parents may be disappointed with each other and give too much affection to the child, or they may be too anxious, due to their own neurotic tendencies, and therefore overprotect the child. Too much financial security or a home that is too calm and unruffled or parents who do not permit the child to learn things by experiment for fear of injury—all these factors tend to overprotect the child and stunt the development of his self dependence and result in eventual unhappiness.

Perhaps the most important formula, the golden mean that every successful parent must learn to

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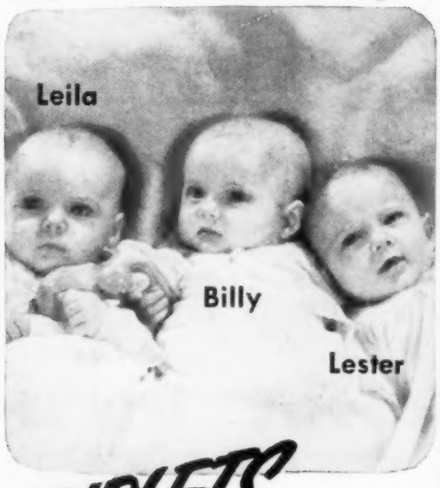

TRIPLETS especially need this gentle care...

"I'm using new, quick Lux for everything that touches my babies' delicate skins," says their mother, Mrs. G. E. Knapp. "It has the same marvelous Lux gentleness I've always depended on, but it's amazingly *fast!*"

Four years' research, an added ingredient costing many thousands of dollars yearly bring you new, quick Lux. Tested with 10 other leading soaps, new, quick Lux goes further (gives more suds ounce for ounce) and it dissolves 3 times as fast in water *as cool as your hand.* It's safe for anything safe in water alone.

In the same familiar box... your dealer has it now...at no extra cost to you!

keep, is that fine balance between love and a sense of security and at the same time sufficient freedom for action and experimentation to become self reliant. A child can be made as unhappy by too much security as by too little. Overprotection can stunt personality growth. The ability to overcome obstacles grows by exercise and experience. The child who has been given the opportunity for enough experience develops ingenuity to meet life's real problems when they come along.

There is a popular notion that in our present age of scientific progress with physical hygiene taking care of the body of the child and with psychology and education taking care of the mind of the child, the parents can sit back and rest from their labors. But every wise parent knows that science offers no substitute for the intelligent common sense training of a real home.

The DOCTOR LOOKS into YOUR STOMACH

(Continued from page 271)

case both x-ray and gastroscopy revealed nothing wrong. Clearly her trouble was psychic. So she was sent to a psychiatrist instead of a surgeon.

An American banker had been diagnosed as a nervous casualty of "Black Friday"—that day in October 1929 when all went "black" on the stock exchange. In spite of his continued complaints of digestive trouble, doctors found nothing organically wrong and sent him to a Florida sanatorium for rest and mental treatment. Even Dr. Schindler felt sure he was merely oversensitive and had permitted his financial troubles to go to his stomach. But the banker insisted on gastroscopy, which surprisingly revealed an advanced atrophy of his stomach's mucous lining.

Dr. Schindler, it should be pointed out, is not now in private practice; his work consists chiefly of teaching to others the technic of which he is the master.

Stimulated by such results, stomach specialists are constantly trying to increase their knowledge of the human stomach. One of their most ingenious attempts is a small cylindrical stomach camera, fastened to the end of a flexible tube. Above and below a miniature arc lamp are four small strips of film, which can be simultaneously exposed through pinholes. A metal sleeve protects the lens from moisture until the moment of taking the photograph. The tube is introduced into the patient's stomach in the same manner as is the gastroscope. The desired position is determined by posing the patient before a fluoroscopic screen. When the stomach has been inflated, the arc lamp is deliberately burned out, producing a brilliant flash. Sixteen separate pictures are snapped at once. Enlarged to life size, they are a permanent black-and-white record of stomach topography. Unfortunately, the pictures are not sufficiently clear, so for the time being, until the development of microfilm sensitive enough to record delicate shadings, the stomach camera must remain in the laboratory.

Eventually—stranger things have happened—audiences may see on the screen colored moving pictures of the stomach's wonderful interior decoration. They will see something rather like glimpses of a faintly pulsating, gently stirring, orange-red Carlsbad Cavern. Which is what physicians can see in your own stomach now, with the possibility of great benefit to your health and quite without danger of accident. No death resulting from examination with the new flexible gastroscope has ever been reported.

POSSIBLE CLUE to CAUSE and CURE of a BRAIN DISEASE

A clue as to the possible cause as well as the cure of a brain disease which heretofore has been almost invariably fatal is contained in the work of Norman Jolliffe, Karl M. Bowman, Louis A. Rosenblum and Harry D. Fein, New York, as they report in *The Journal* of the American Medical Association.

The condition, which they term "nicotinic acid deficiency encephalopathy," is characterized by a clouding of the consciousness, uncontrollable grasping and sucking reflexes and rigidities of the extremities.

A startling reduction in the death rate of persons suffering with this disease is reported by the authors as a result of treatment with nicotinic acid, which they administered.

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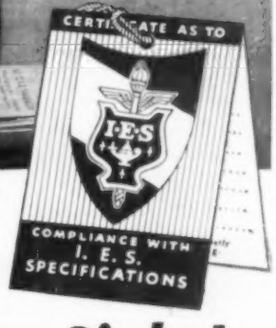

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MEDICINE IN THE NEWS

RABIES STILL RAMPANT

FIFTY-FIVE years ago medicine in the news was the story of Louis Pasteur and his conquest of rabies, popularly known as hydrophobia. This was good news. Today, though half a century has passed, the news about rabies is bad.

Throughout the United States, especially in the South, there are numerous mad dogs. The whole story is told in W. E. Aughinbaugh's article on page **233** of this issue of HYGEIA. The same story will be told dramatically for radio listeners on the evening of Feb. 21, 1940, over the Blue network of the National Broadcasting Company. The program is scheduled for 10 p. m. Eastern standard time (9 to 9:30 Central standard time, 8 to 8:30 Mountain time, 7 to 7:30 Pacific time). The radio broadcast will be based on Dr. Aughinbaugh's article, plus reports from official governmental records and the work of the Rockefeller Foundation directed toward the control of rabies. The vehicle for dramatization will be the life of Louis Pasteur.

Special plans are being made for the radio production. The music will be played by the National Broadcasting Company's Chicago orchestra, under the personal direction of Joseph Gallicchio. A musical arrangement based on the score of Warner Brothers' picture, "Louis Pasteur," starring Paul Muni, used by special permission, is being prepared by Don Markotte of the National Broadcasting Company's music library. The dramatic episodes will be depicted by a selected cast of NBC radio actors under the direction of J. Clinton Stanley, director of the series "Medicine in the News," the regular program of the American Medical Association.

A reprint of Dr. Aughinbaugh's article on rabies has been prepared and will be sent free on request to radio listeners who send a stamped, self-addressed envelop for it. Address the American Medical Association, Chicago, *not* the National Broadcasting Company.

Louis Pasteur (as portrayed here by Paul Muni) discovered the specific treatment for rabies.

TUNE IN HERE

New England States

WNBC	New Britain, Conn.
WLBZ	Bangor, Me.
WEAN	Providence, R. I.

Middle Atlantic States

WABY	Albany, N. Y.
WBEN	Buffalo
WJTN	Jamestown, N. Y.
WJZ	New York City
WMFF	Plattsburg, N. Y.
WSAN	Allentown, Pa.
WLEU	Erie, Pa.
WKBO	Harrisburg, Pa.
WGAL	Lancaster, Pa.
WFIL	Philadelphia
KDKA	Pittsburgh
WORK	York, Pa.

East North Central States

WENR	Chicago
WGL	Fort Wayne, Ind.
WBOW	Terre Haute, Ind.
WBCM	Bay City, Mich.
WXYZ	Detroit
WFDF	Flint, Mich.
WIBM	Jackson, Mich.
WJIM	Lansing, Mich.
WSAI	Cincinnati
WING	Dayton, Ohio
WIBA	Madison, Wis.

West North Central States

KSO	Des Moines, Iowa
KMA	Shenandoah, Iowa
KSCJ	Sioux City, Iowa
WREN	Lawrence, Kan.
KANS	Wichita, Kan.
KYSM	Mankato, Minn.
WTCN	Minneapolis
KROC	Rochester, Minn.
KFAM	St. Cloud, Minn.
KWK	St. Louis
KSOO	Sioux Falls, S. D.

South Atlantic States

WCOA	Pensacola, Fla.
WAGA	Atlanta, Ga.
WSOC	Charlotte, N. C.
WTAR	Norfolk, Va.
WRTD	Richmond, Va.
WCKV	Charleston, W. Va.
WBLK	Clarksburg, W. Va.

East South Central States

WAVE	Louisville, Ky.
WAPO	Chattanooga, Tenn.
WROL	Knoxville, Tenn.

West South Central States

WJBO	Baton Rouge, La.
KTOK	Oklahoma City
KFDM	Beaumont, Texas
KTSM	El Paso, Texas
KGKO	Fort Worth, Texas
KXYZ	Houston, Texas
KRGV	Weslaco, Texas

Mountain States

KTAR	Phoenix, Ariz.
KVOA	Tucson, Ariz.
KVOD	Denver
KGHF	Pueblo, Colo.
KOB	Albuquerque, N. M.
KLO	Ogden, Utah
KUTA	Salt Lake City

Pacific States

KECA	Los Angeles
KFSD	San Diego, Calif.
KGO	San Francisco
KTMS	Santa Barbara, Calif.
KEX	Portland, Ore.
KJR	Seattle
KGA	Spokane

Canada

CFCF	Montreal

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CONTEST DEADLINE APRIL 1st

Don't miss the deadline for this $500 "Picture of Health" contest! Send in your entries right now before it's too late. April 1 will come around before you know it!

***Hygeia* is offering $200 as first prize to the photographer—amateur or professional—who can best convey health photographically. Other prizes totalling $300 and 12 free subscriptions to *Hygeia* will be awarded to fifty-four other photographers whose pictures have the required "health angle" and which show originality, good workmanship, human interest and authenticity. Good prints not winning prizes may be bought by *Hygeia* for illustrative purposes.**

Any one may enter. There is no entrance fee, no limit on the number of photographs you may submit. Each picture must relate to some health-building or medical activity or must symbolize a conception of health. Your set of prints must be accompanied by the Official Registration Blank appearing on this page—*that is important*. Only one Registration Blank—properly filled out—is required for all pictures entered by one photographer.

Ideas for your pictures should not be hard to get. Sports, children, hospitals, scientific laboratories and food are some of the subjects from which you can draw ideas for prize-winning photographs.

RULES of the CONTEST

1. All pictures must illustrate a medical or health-building activity.

2. Each photograph must carry on the back the typewritten or printed name and address of entrant. The Official Registration Blank appearing on this page, or a reasonable facsimile thereof, should accompany each set of prints.

3. Submit any number of pictures. Montages or other special effects are not eligible. Prints must be at least 5 x 7 and mounted on a plain mat surface.

4. No employee of *Hygeia*, the American Medical Association or their families are eligible to enter the contest.

5. No picture is eligible for this competition if exclusive rights on it have been granted elsewhere.

6. Pictures will be returned only if accompanied by a self-addressed envelop or label with sufficient postage to cover return mailing. While exercising the utmost care in handling, *Hygeia* does not assume any responsibility for the loss or damage of entries.

7. The judges of this contest will be Torkel Korling, famous photographer; Austin A. Hayden, M.D., and Ethel S. Vernon, *Hygeia* Art Director. Their decision must be accepted by contestants as final.

8. All entries must be in the hands of the *Hygeia Contest Editor*, 535 N. Dearborn St., Chicago, by April 1, 1940. The winners will be announced in the June issue. In case of ties, duplicate prizes will be awarded. If any of these rules have not been complied with, the entry is immediately disqualified.

9. Prize winning prints, including reproduction rights, become the property of *Hygeia*.

10. The Contest Editor regrets that he cannot undertake correspondence with regard to entries.

55 PRIZES — 55 CHANCES to WIN

1st Prize	**$200.00**
2nd Prize	**100.00**
3rd Prize	**50.00**
Next 5, each	**10.00**
Next 10, each	**5.00**
Next 25, each	**2.00**

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Are You Cultivating an Objective Attitude?

By J. MACE ANDRESS

An objective attitude is a necessity for an up-to-date teacher. She realizes that misbehavior has its fundamentals deep in the child's personality, and in order to cope with it, she must rule out emotion.

AN INTERESTING story is told of a great physician and teacher in a medical school. One afternoon he conducted a group of his students through the wards of a hospital where he pointed out cases of the most malignant diseases. Although some of the patients were close to death, he talked to his class clearly and with no show of emotion. At the end of the trip he invited the class into his garden to have a cup of tea. As they entered, he was met by his wife who asked him to help with their infant son who had fallen from his high-chair and bumped his head. There was only a slight abrasion of the skin with a moderate flow of blood from a small scratch, but the doctor became so upset that his wife said to him, "Never mind. I will call up Dr. Jones. Just go on with your tea." A man who could perform major operations and treat other people's children in serious illness was incapacitated when it came to treating a minor emergency in his own family. It is difficult to think straight and act right when our own personal interests and affections are involved.

This example shows the need of an objective attitude, the ability to rule out prejudice and emotion, to take a business-like point of view toward a problem that concerns oneself and others. This is so difficult that it is regarded as unethical for physicians to attempt to treat members of their own family or themselves. There is an old saying among physicians that a doctor who doctors himself has a fool for a doctor and a fool for a patient.

The good teacher today finds it necessary to adopt an objective attitude. It is just as silly for a teacher to be horrified and scold a child for a misdemeanor as it would be for a gardener to have a temper tantrum because his flowering plants were not doing well. The good gardener will consider the needs of the plant, such as moisture, sunshine, adequate fertilizer and freedom from insect pests. In the light of such an inquiry, he is equipped to deal with his problem

successfully. The good teacher is moved by the same simple philosophy. She tries to understand, not blame. She searches for the difficulties which the child is trying to face at home, in the school and on the playground. There is no harboring of grudges against the pupil. There is a discrimination between what the child does and the reason why he does it.

Let us take the case of Frances. She has been caught taking money from a classmate's locker. In days gone by, such an act would have been called simply "stealing." An example would have been made of her. She would have been severely punished, possibly made to appear in court, and the public would have known of her misconduct. The point of view would have been that right and wrong are like black and white, easily distinguishable, that Frances knew what she was doing, might have willed otherwise and should be punished for her act.

The teacher with sound psychologic training does not condone the act, but she realizes that Frances is in trouble and needs help. Immediately a number of questions occur to her centering around the main problem, "Why did Frances take the money?" Other questions present themselves. What are the needs of a girl of Frances' age, which was fourteen? What need did this kind of behavior satisfy? What desirable satisfaction can be found to take its place? Investigation shows that Frances is one of a large family of children. She works for her board and clothes and receives an extremely small allowance. She has a definite feeling of inferiority, because she cannot dress and spend money like other girls. She had planned to use the money to treat some of her companions. Buying ice cream sodas for the "gang" would evidently help to satisfy the longing for social equality.

Then Frances was given a chance to show off her abilities in music, for she had a pleasing voice, and a way was found whereby she might earn a little more pocket money. She became thoroughly dependable and was no longer a problem. All this happened because Frances had a teacher who realized that she was teaching children rather than subjects. The teacher was able to be a real friend, because she had acquired an objective attitude.

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The SCHOOL HOT LUNCH

By GLADYS TITSWORTH CHASE

A community may have almost any kind of school it desires, if citizens will work together. This is a story of what one community under able leadership did to establish a system for hot lunches in the schools.

THE Hillsdale, Mich., school hot lunch program is distinguished by the hearty cooperation of the community in supplying food, funds, equipment and personal services. Last year it was the largest single project of its kind employing WPA women workers in the Detroit district.

Four years ago, the Hillsdale City Service Committee, composed of representatives of every local religious, educational, fraternal and business organization, undertook to provide a complete noon lunch to underprivileged elementary school children during the cold months of the school year.

This venture, which was initiated for indigent children, has expanded into a health project that now serves many classifications of school children.

A "Hot Lunch Committee," headed by a dentist's wife who formerly taught home economics, was appointed to find the most needy children and a place for feeding them, to assemble equipment, hire a cook, plan menus and serve the meals. The W. K. Kellogg Foundation, which largely finances the health departments of Hillsdale and six other Michigan counties, contributed toward starting the project, as did the city council and many private organizations. The gas company donated second-hand stoves. Lodges, churches and individuals gave dishes, forks, spoons and cooking utensils. The Board of Education paid the salary of the cook, and the older children receiving the noon meal assisted with the dish washing.

During the first year only sixty children, all indigents, were served in a basement room of the high school. The lunch consisted of a hot main dish, sandwiches, half pint of pasteurized milk and dessert. To compensate for deficiency in the home diet, some protein-rich food other than milk, such as eggs, fish or cheese was always included. Care was taken to provide a bit of raw vegetable or raw fruit or cooked tomato in each meal. Sandwiches were made of one slice of whole wheat bread and one slice of white bread, both always buttered and usually with additional filling.

Each child was allowed two or three servings of the main dish, three half-sandwiches and second helpings of dessert when the supply permitted. Second servings of milk were not provided, as milk is served at 10 o'clock each morning to all elementary school children whose parents request this service, whether the family is able to pay for it or not. The wholesale value of the foodstuffs provided was slightly over 7 cents per child per day, which has continued to be the case.

In the three succeeding years, the venture which was initiated to feed indigents, expanded into a health project, serving many classifications of school children and offering several educational features.

Last year, the 200 children who were served in four grade schools included rural children of all economic levels, community children living far from school or having both parents employed at noon, children whose fathers were working but had too low an income for the size of their families, children whose mother was ill or overworked and so forth.

No child was permitted to pay for the noon lunch, but parents who were able contributed foods in quantity and gave money to the general fund. Rural children's parents brought bushels of potatoes, carrots, onions, cabbage and apples, dozens of eggs and quantities of home-canned tomatoes and fruits. Surplus Commodities furnished flour, whole wheat cereal, rice, beans, butter, dried fruits and on rare occasions some fresh fruit to help pay for lunches for children from relief and WPA families. Over thirty Hillsdale clubs or societies and many individuals gave money or canned goods and grocery showers.

The director employed by the Board of Education and three women WPA workers prepared the food in the kitchen of a large, new grade school building. Lunches were sent out to two smaller grade schools, where mothers or other friends of the school served the

lunch and washed the dishes each day, contributing their services.

In a third small grade school, the teacher of a room of twelve retarded children requested that she be allowed to have her older girls prepare and serve the noon lunch and wash the dishes, as an educational measure. Accordingly, part of her activities laboratory was equipped with a sink, electric hot plate and simple cooking and serving facilities. This courageous teacher, who is a specialist in training exceptional children rather than in home economics, gave valuable homemaking training to her charges while providing a group of fifteen with a much needed lunch. Also, due to the fact that the American Motherhood Club and a church group assisted in this experiment, the public became greatly interested in the many problems involved in training the exceptional child.

Another new departure, which developed last year, was the distribution of the actual menus and recipes served in the elementary schools. These were designed to teach the mothers to serve balanced meals at home and to use cheap foods, especially those furnished by the relief agency. Recipes for quick hamburger-vegetable soup, goulash, chopped vegetable sandwiches, whole wheat and raisin pudding were widely distributed.

The recent inclusion on the "Hot Lunch Committee" of representatives of the five country districts sending children to the city schools has also brought interesting educational developments. Two representatives have vegetable pits for storage of cabbage, carrots and other varieties for late winter use. All asked for fruit jars to be loaned to mothers wishing to can fruits and tomatoes in exchange for their children's lunches. Accordingly, several hundred fruit jars were received in response to newspaper appeals, and products were sometimes donated to fill them.

Although families who can give their children an adequate lunch at home in the company of their parents are strongly urged to do so, the number of children served at school increases each year. Since teachers report better attention and achievement and parents note increased health and physical development in the recipients of the school lunch, the community is carrying through the fifth year of the project with enthusiasm.

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Whatever his age or means of locomotion, every child faces an individual problem of getting from his home to his school.

Watch That STOP LIGHT!

By EFFIE F. KNOWLTON

Binghamton, N. Y., has attracted much attention with its superior health program. The author, who was formerly a supervisor of health education there, will contribute articles on highlights of health teaching. Examples will be selected from actual teaching experience in Binghamton. The first article deals with the kindergarten.

LAST September more than 30 million of America's youth set forth for public or private schools and colleges that were opening their doors to receive them. From millions of homes "there was a child went forth" by airplane or boat, by train or trolley, by private car or public bus, by bicycle or, perchance, by the services of his own two feet. Whatever his means of locomotion, every student traveler, from the tiny tot entering an educational institution for the first time to the doctoral candidate, faced an individual problem in getting from his home to his school. While one solved his problem intelligently, another dealt unintelligently with his; while one was thoughtful, another was thoughtless; while Jean was careful, John was careless. But, since our own America is becoming increasingly safety conscious, it is probable that a vast majority of her young millions who mobilized for education in the fall of 1939 had had more or less preparation for safe traveling.

"My mother told me to look both ways before I cross the street," pipes Betty of the kindergarten of the Alexander Hamilton School in Binghamton, N. Y. (The children in Betty's class are from favorable homes.)

"My daddy said, 'Watch for the light at the corner,'" chimes Arthur.

So here are thirty 5 year olds talking over with their teacher, Mrs. Smith, this whole matter of going safely to and from school when one has only to walk to one's nearby building.

Betty has led straight into the first point for teaching emphasis. Mrs. Smith explains: "Betty tells us to look 'both ways' which would mean *two* ways. But we always cross the street at a corner, don't we? Then we must look *every* way before we leave the curb. Where one street crosses another, we must look *four* ways."

Dickie's contribution (simultaneous with Betty's) of "When a car is coming, look both ways" brings the warning not to be in the street when a car is coming—to wait until all cars have passed. "Why must you be careful not to be in the street when a car comes? Of course no driver would want to strike you. Couldn't you be sure of getting out of the way?" he asks.

Gordon answers emphatically, "No, for a car might be speeding and skid!" And Lanny gives an instance, "My pop skidded in his car." There follows a brief discussion of what makes a car skid. The children decide to be especially careful when there is ice, snow or water.

Rose is eager to describe the dangers her puppy encountered when he ran across the street "two times" in front of cars. The children agree with their leader that they do not want to act as puppies do.

Mrs. Smith reminds the children of Arthur's watching for the light at the corner. "How does the light help you, Arthur?"

"The red light tells me not to cross the street," replies Arthur.

So Mrs. Smith calls for some one to go to the small color charts and point to the color which means stop. As Debby does this, all the children are impressed with the bright circle of red paper.

"But what color says you may cross the street?" asks Mrs. Smith.

Sharon responds, "Green means go," so Mrs. Smith lets her point to the "Go" color.

Mrs. Smith has a folded chart of black pasteboard with circles of green and red paper that may be covered and uncovered to illustrate traffic lights. Using this device, she reviews with the children the green "Go" signal, the intermediate light (which now is red in this city) and the second red signal which says "Stop."

Now a simple dramatization. We imagine that an aisle between tables is a busy street. Peggy and Lynne go to the fireplace and walk down this street. Their teacher is the post holding the traffic signals which they obey as their classmates observe.

"But what other helpers have we when we want to cross the street?" asked Mrs. Smith. Children respond

enthusiastically, "Patrol boys!" "Policemen!" The teacher explains carefully that, though patrol boys are fine helpers for the children at school, they are not real policemen; they are good boys chosen by the principal for this work. The children are shown a patrol boy's belt and badge and are requested to obey the boy who wears them.

"What does the patrol do?" questions Mrs. Smith.

"He stops the cars," replies Jimmie.

"No, Jimmie," and Mrs. Smith speaks slowly, "the patrol boy does not stop cars." Other children hasten to correct Jimmie's statement. "He stops us when the cars are coming!" Expressing approval of this correction, the teacher shows the children a large, clear picture of a patrol boy holding young children back from the curb as traffic passes—just as their own patrols protect them at dismissal.

"Some one named another who helps you across the street; who is that?" inquires Mrs. Smith.

"The cop!" from Dean.

"Yes, the policeman is your friend," assures Mrs. Smith as she shows a large picture of a policeman. To her question, "Why is he blowing the whistle?" the children reply, "To stop the cars." Mrs. Smith emphasizes the point: "Yes, the policeman does stop cars." Attention is called to the pleasant face of the policeman. "He likes children, doesn't he?" The children think he does, and they tell about the kind policemen at their own street corners.

Now Mrs. Smith's question is, "May we cross the street wherever we happen to be?"

Dale is prompt with, "Go to the corner to cross."

If you lived straight across the street from the school building, would you go to the corner just the same?" Dale is sure he would.

The teacher reads a little poem, "The Policeman," and follows with a brief story from a cleverly illustrated book.

Now we are going out to the street. The 5 year olds do an excellent job of putting on coats easily, and we follow Dean and Debby across the playground and to the corner some distance away.

At the intersection of two streets, Mrs. Smith points out all the directions in which one must watch for traffic and asks the children, "Can you count to see how many ways you must look before crossing?" The children do count, "One, two, three, four."

Susan, Ronald and others look four ways and then cross the street. All children walk, and Mrs. Smith expresses approval of their walking fast instead of running.

Finally, groups of boys and girls learn through practice: going to the corner, stopping not too close to the curb, looking four ways, waiting for the oncoming cars to pass and walking briskly across the street.

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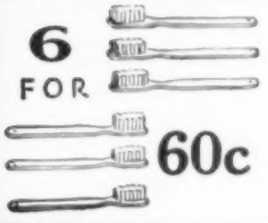

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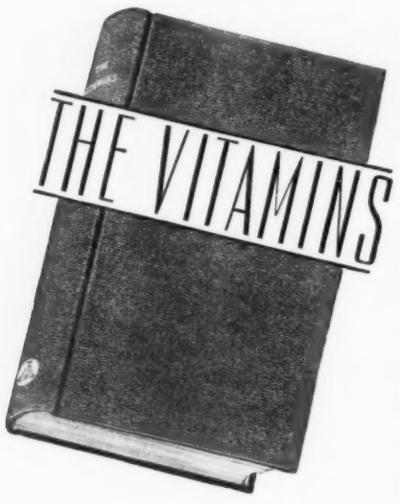

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MENTAL HYGIENE for the STUDENT

By CHARLES R. FOSTER

New Jersey is one of the few states that is taking a keen interest in mental health. Recently Dr. Foster, a professor of education in the School of Education at Rutgers University, made a survey of the schools of the state to find out to what extent and in what manner the principles of mental hygiene were being applied. In this article and in others to follow, he will tell about the results of this study and offer some concrete suggestions for the classroom teacher.

WHAT is mental hygiene? is a question often asked. Accordingly, I propose this answer: Mental hygiene is to mental health what physical hygiene is to physical health. It is prevention, with a strong constructive influence. Prevention of what? Prevention of distortion, narrownesss and fear. Prevention of cynicism, timidity, jealousy and conceit. These are the wasting defects of personality. They are the causes of defeat and unhappiness in life.

It is the belief of teachers who have studied mental hygiene that boys and girls can be aided in school, not only in their mastery of arithmetic and reading but also in learning how to avoid these "ills" of the mind. They can be guided for everyday living. The preventive notion in mental hygiene is similar to that recognized in connection with bodily health. This nation has made progress in preventive medicine. We realize that physical health is something of enormous value, worth working for and worth some sacrifice to keep.

Mental hygiene asks us to give some thought to the equally significant problem of keeping our minds in health, our emotions under reasonable control, our purposes wholesome and our attitudes toward other persons free of suspicion, jealousy or other signs of defect.

In a recent study entitled "Mental Hygiene in New Jersey Schools," an inquiry was made into just what the schools of the "Garden State" were doing about this matter. The intent was to find out whether the practices of New Jersey teachers and administrators could be depended on to promote these phases of mental health or whether they might, on the contrary, be handicapping children in their attainment.

They found that progress was being made but that there were still many schools and school systems which had not been affected by the mental hygiene concept. Too many teachers were trying to work with pupils whose personality difficulties they did not understand. Too many teachers were untrained in this respect even after years of emphasis on mental hygiene. Too many schools were offering their pupils subject matter little suited to their needs or interests in life.

Too many schools were handicapped by a lack of guidance or clinical facilities. Too many superintendents were failing to avail the teachers of much needed information about their pupils.

On the side of progress, some communities were found in which none of these criticisms was true. In some towns the teachers were "mental hygiene conscious," and every step in the educative process, from the selection of teachers and textbooks to the awarding of diplomas at the end, was being examined in the light of its effect on the pupils' mental health.

In a school imbued with the mental hygiene point of view, the teacher will always be looking to

the years ahead and asking herself whether the habits Johnny is acquiring now in her room will be the kind of habits that will help him then. She will know not only what she is supposed to teach Johnny, but she will also know Johnny.

This matter of mental health is so often evident in connection with vocational success. There are plenty of instances in which young men have secured high technical training, even doctor's degrees, only to crash on the rocks of vocational failure later on. One such young man, who came to my attention, was hired by telegram when a certain teacher's college president wanted a new faculty member "in a hurry." But he neglected his well established custom of interviewing the candidate first. The young man, fresh with his doctor's degree, appeared for his teaching assignment. He was serious and anxious to please. But the next year he was looking for another job.

"I couldn't possibly keep Smith," said the college president. "The students didn't like him, and the faculty members all think he's queer. It will be a long time before I hire any one again by telegraph, without looking him over first!"

It wasn't that Smith didn't know his subject. But he had failed, somewhere along the line, to grow in the ways of a normal human being. If we would trace his course back through the years, we might find that he was the boy the teachers always pushed ahead because his work was always well done and on time. He probably never made the slightest trouble for any of them. No one gave a thought to the fact that he was shy, retiring and unsocial. He would "get over" that.

Mental hygiene is intended to give the teacher an awareness of the needs of such boys and girls. She will be on the alert to spot the shy youngster who is good at his studies—just as alert as she is in handling noisy Albert who is always trying out little tricks to disturb the peace and quiet of the fourth grade.

There are many characteristics that a school will reveal if its principal and teachers believe in mental hygiene. In such a school there will be:

1. Constant emphasis, both on the part of the teachers and administrators, on the need for understanding the child before attempting to teach him.

2. Constant effort to improve the means of evaluating and reporting on the pupil's work (for example, report cards).

3. Flexibility in handling children (their assignment to classes, courses and subjects) so that adaptations may be made to suit their needs.

4. Changes in the curriculum, so that what the children are studying will have meaning to them. For most of the children, the pre-college type of curriculum will have to suffice.

5. Definite arrangements for the study of pupils' needs and for their guidance.

6. A wider range of extracurricular activities. They are the means of helping youngsters to discover their own abilities and interests, vital from the point of view of mental hygiene.

7. Concern on the part of superintendents and principals for the mental health of teachers.

8. Means for acquainting teachers with new and better ways of performing their duties; assistance for them in interpreting and applying the findings of research.

9. Records and facts about the children, kept in ways that will make them accessible to the teacher.

10. Use of the case conference procedure, not only in dealing with children who have adjustment problems, but also in the guidance of all children.

11. Visits by teachers to the homes of pupils, especially on elementary grade levels, so that the school may know the background against which education of the child is supposed to take place.

These are conditions which will be met in any school system which seeks to carry on its work in conformity with the principles of mental hygiene. The heart of the matter, of course, lies in the spirit of the whole enterprise.

To Contributors:—The editor of the School and Health Department will be pleased to receive articles dealing with the actual solution of concrete and practical health education problems in the school. Contributions on general theory are not solicited. Articles must not exceed 1,000 words in length and must be typewritten double spaced. Stamps should accompany manuscripts to insure their return if rejected. All articles accepted will be paid for at regular rates. Address J. Mace Andress, editor of School and Health Department of HYGEIA, *67 Clyde St., Newtonville, Mass.*

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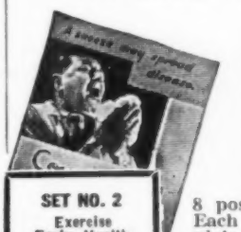

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Medical News OF THE MONTH

Tuberculosis

The fate of the tuberculous individual may depend largely on his behavior during certain crises of his life, J. Hollo suggests in the *American Review of Tuberculosis.*

Under favorable conditions, he points out, tuberculous infection does not involve serious danger; but if resistance is broken by some additional factor, infection will progress uncontrolled.

Those persons who live in poor economic circumstances or in an excessively infected environment are exposed over long periods to factors contributing to such breakdowns. These factors include malnutrition, overexertion, lack of pure air or lack of hygienic culture. However, the endangering factors are not generally present in the environment of persons of the middle and higher economic classes. If tuberculosis becomes active in them, the connection between the apparent start of the disease and some definite harmful influence is frequently observed.

Dr. Hollo gives the following as examples of such potentially harmful influences: college or university examinations, military service, training for athletic competition, excursion connected with mountain climbing, camping, excessive sunbaths, seasonal or temporary overwork, love affairs, childbirths in quick succession, divorce proceedings, death in the family, weight reducing "cures," removal of tonsils, drastic antisyphilis treatment and recurring disease.

The overexertion often connected with many of these events can be avoided by attention to proper nutrition, hygiene and exercise. Thus active tuberculosis may be prevented.

Sensitivity to Flour

Improvement in the hygienic conditions of bakeries and early examination of employees for evidences of sensitivity to flour are recommended by H. A. E. van Dishoeck, Amsterdam, The Netherlands; and D. J. Roux, Capetown, South Africa, in *The Journal of Hygiene.*

The authors' tests revealed allergy to flour in 25 per cent of 262 bakers and millers in Amsterdam. In most of the sixty-six persons the allergy resulted in asthma, hay fever or eczema.

"The systematic examination of workers in the first years of their employment might detect flour illnesses," the authors suggest. "If early sensitivity to flour is found, the person should be advised to take up some other profession. When sensitivity is noticed later in life in a flour worker, he should work as little as possible with dough to prevent eczema and with the mixing of flour to prevent asthma and hay fever.

"Our investigations showed that the percentage sensitized in the small bakeries (44 per cent) was considerably greater than in larger bakeries (25 per cent) and in cake bakeries (27 per cent). In the small bakeries the exposure to flour dust is greater, more work is done by hand, the employees do not report their complaints so readily, and the sick worker is not dismissed so easily.

"From the personal histories of the patients it appears that in 37 per cent symptoms developed within the first five years of employment and in 57 per cent within ten years. The bakers, in small bakeries especially, were sensitized when still young. In millers in the big hygienic factories symptoms develop considerably later in life.

"Hypersensitiveness to flour is most probably an allergy due to inhalation like that due to dust or pollen. Sensitization through the digestive tract by the eating of bread seems to be rare, as among 150 normal people who regularly consumed bread only one positive reactor to flour was found. Among our patients the hereditary factor was negligible."

Pictures of the Inside of the Heart

A method for taking x-ray pictures of the chambers of the heart and the blood vessels of the lungs and chest, thus making for more precision in the diagnosis of ailments affecting those parts, is described by George P. Robb and Israel Steinberg, New York, in *The Journal* of the American Medical Association.

By injecting a substance known as diodrast, which is impenetrable to the x-rays, and taking x-ray pictures as the substance passes through the heart and blood vessels of the lungs and chest, the two men obtain pictures in which the involved parts stand out in contrast to their surroundings.

A Substitute for Blood in Transfusions

The possibilities of blood serum, the colorless liquid part of the blood in which the blood cells are suspended, proving to be an effective substitute for blood in transfusions, are indicated in investigations reported by Sidney O. Levinson, Frank Neuwelt and Heinrich Necheles, Chicago, in *The Journal* of the American Medical Association.

The life saving benefits of such a substitute in combating the effects of hemorrhage are indicated by the fact that it can be given in massive amounts without delay or preliminary typing, as is required for transfusions of the whole blood. It also can be stored in large amounts for long periods of time without deterioration.

Although most of their investigations of the value of blood serum were on dogs, the authors report that they had the opportunity of employing serum in a limited number of human cases and found that the effects paralleled the beneficial results observed in the animal cases.

Blood serum is obtained by first testing the blood of donors for sterility and with Wassermann and Kahn tests for syphilis, after which it is allowed to clot for forty-eight hours. Then it is placed in a centrifuge, the serum being thrown off at the top and clotted blood at the bottom. The serum is again tested for sterility and then placed in sterile containers ready for use.